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## TREASURE FOR THE TAKING

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# TREASURE FOR THE TAKING

by

P. E. CLEATOR

ILLUSTRATED

LONDON

ROBERT HALE LIMITED  
63 Old Brompton Road S.W.7

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FIRST PUBLISHED IN GREAT BRITAIN 1960

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TO



THE GREATEST TREASURE OF ALL



## ACKNOWLEDGEMENTS

ONE OF THE pleasures of authorship is the generous response which requests for assistance almost invariably evoke, even from complete strangers, and I find myself greatly indebted to all those who have contributed to the present work by supplying information and illustrative material. Fellow writers and publishers whom I have to thank are Ruth (Mrs. A. H.) Verrill, Rolf Blomberg, Gordon Cooper, Charles Quarrell, Jill Pooley (*Life Magazine*), Raymond Carlson (*Arizona Highways*), Macmillan and Co., Hirmer Verlag für wissenschaftliches Lichbild, H. F. and G. Witherby, William Morrow and Co., Almqvist and Wiksell, Eyre and Spottiswoode, J. B. Lippincott and Co., the Phaidon Press and G. P. Putnam's Sons.

Valuable information and assistance have also come from the Admiralty Record Office, Lloyd's Register of Shipping, the South African Tourist Corporation, the Public Record Office, London, Josef Muench, Santa Barbara, J. P. Hudson, of the British Museum's Department of Manuscripts, Arch. C. Gerlach, of the Library of Congress, Washington, Raymond Dow, of New York's Treasure Trove Club, C. M. Moerdyk, of the South African Department of Mines, W. F. Colclough, of the American Bank Note Company, George MacLeod, of the Fisher Research Laboratory, and Harry F. Arader (Schenectady Division) and J. T. Elovich (Detroit Division) of the General Electric Company, while maps or photographs were supplied by Marguerite Coney, of the Grace Line, New York, J. O. Kilmartin, of the U.S. Department of the Interior, Washington, C. Norton, of the Anglo American Corporation of South Africa, Johannesburg, E. E. T. Day, of the Royal Geographical Society, London, J. Morgan Smith, of the U.S. Department of Agriculture, Albuquerque, New Mexico, the Admiralty Hydrographic Establishment, Taunton, and Brad Walsh, of the Phoenix Chamber of Commerce, Arizona. Other photographs appear by arrangement with the *Radio Times Hulton Picture Library*, the *Exclusive News Agency* and the British Museum.

Much literature has been consulted, including such standard works of reference as *Americana*, *Britannica*, *Chambers's*, *Collier's*, *Compton's*, *Everyman's*, *Funk and Wagnall's* and *Universal*, in addi-

tion to the many primary and secondary sources of information which are listed in the Bibliography, the contents of which have been numbered so as to facilitate identification where a reference to a particular author occurs in the text.

To the anonymous army of librarians from half a dozen different establishments who located and provided copies of these works for my attention; to my wife and my old friend W. H. Browning for their indexing and proof-reading activities; and to Gordon Chesterfield and his colleagues for their customary meticulousness in the realm of production, I am also much beholden.

P. E. CLEATOR

## AUTHOR'S NOTE

*Discerning reader, has it yet occurred to you to ask why anyone who knows the whereabouts of hidden wealth should be content to write about it for the benefit of others, rather than set about acquiring it for himself? Then let me at once concede that this poses a fair question which merits an honest answer. Certainly it is not because I am overburdened with riches already, still less that I affect to despise them. The deplorable fact is that my attitude towards all accounts of lost or concealed treasure is one of amiable scepticism coupled with a disinclination to exchange a fairly agreeable way of life for one of danger and discomfort in some remote and god-forsaken land. But there are limits to my indolence. Show me convincing evidence of the undoubted existence of half a ton of gold, buried reasonably near the surface and within, say, a radius of twenty miles from where I am now reclining at my ease, and I'll undertake to investigate the matter, if not forthwith, then most certainly at the first convenient opportunity.*

*But do I hear it suggested that if I really knew the location of a diamond-studded beach, I would now be out there, taking my pick and filling my pockets, even if it were to be found in the southern hemisphere? Well, such beaches do exist there, and it so happens that I have glimpsed the prized stones embedded in the gravel taken from the ancient marine terraces which underlie them. But filling one's pockets with these gems is far easier to contemplate than to accomplish, as I learned several years ago when I spent the best part of six months wandering about Africa, keeping more than half an eye open for specimens of carbon in its crystalline form. But that, as the saying goes, is another story. . . .*



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## CHAPTER ONE

### PREMONITORY PREAMBLE

*Proposition: That, scattered about the world, there awaits discovery untold wealth in the guise of sunken treasure, buried loot, hidden hoards, forgotten tombs, lost mines and the like.*

#### I

SOME COLOUR is lent to the pleasing and romantic notion that vast quantities of lost and hidden wealth lie scattered about the world, awaiting some fortunate finder, by the fact that much treasure is all the while coming to light. But, as the records show, most of these discoveries are brought about by farmers while ploughing, or by demolition squads in the course of tearing down old buildings, or no less accidentally as the result of mining and other excavational activities, so that, while there can be no denying that considerable wealth is constantly being unearthed, the sad truth is that most of it is revealed by chance, rather than by design.

This hard fact in no way deters the hopeful treasure hunter, to whom such unpremeditated finds are merely of academic interest. Rather is his enthusiasm reserved for the enticing prospect of tracking down pirate loot, treasure-filled tombs and sunken galleons, though the possibility of locating some long-lost gold mine, or of finding a stretch of diamond-studded river bed, will serve equally well. And to this ever-promising end, his attention is immediately held by some plausible tale of ill-gotten gains, particularly if the account happens to be accompanied by a reasonably informative map and a set of not too obvious clues (lest someone as clever as himself has already managed to succeed where all other searchers have so far failed). Thus armed, so the argument runs, the outcome of any attempt at recovery will depend upon the reliability of the available information, upon the extent of the financial resources which the enterprise can command and upon the relevant laws of the country concerned.

We may accept this argument and, in the light of it, enquire to what extent the unquenchable optimism of the treasure seeker is justified—if at all. Given, for example, that the interests of some government or other will be involved, legislative measures

designed to control the exploitation of mineral and other wealth are almost certain to be encountered. In England, for instance, the law requires that the finding of hidden riches be reported to the coroner, who is then in duty bound to hold an inquest, that the circumstances of the discovery may be investigated and its precise nature determined. In the absence of an owner, objects of value are deemed to be treasure-trove and, as such, to belong to the Crown, though this is not to say that adequate compensation will not be forthcoming. For the express purpose of encouraging the reporting of finds of possible historical interest, it has long been the accepted rule that surrendered items will not be retained unless they are claimed by a national institution such as the British Museum, in which event some four-fifths of the antiquarian value will be paid to the finder.

Similar arrangements, no less equitable, exist in many other countries, in some of which, *e.g.*, India and Germany, an agreed proportion of the value of the discovery goes to the owner of the land. But elsewhere, the State is likely to be less munificent and may even claim all. Thus, in Egypt, any digging operations which have as their avowed aim the recovery of the golden coffin of some long defunct Pharaoh, or the bejewelled remains of his favourite consort, are now so restricted that members of a mere treasure-seeking expedition (as opposed to the accredited representatives of some recognised scientific society) would be fortunate if they were allowed to set foot in the country, much less given an opportunity of making a search, or of retaining anything of value which happened to be found. And while such a prohibition need not necessarily offer an insuperable bar to a small band of determined and reckless adventurers (as centuries of systematic tomb-robbing on the part of some of the Egyptians themselves go to show), it will be evident that it nevertheless constitutes a serious obstacle, the overcoming of which would entail no little risk.

As for mineral rights, the rules and regulations governing the granting of concessions also varies widely from one country to another, the requisite permits ranging from the readily obtainable to the near-impossible to acquire. Whereas no great difficulty may be expected to attend a desire to search for gold in America or Australia, throughout much of Africa prospecting for diamonds is discouraged by the heavy penalties to which unauthorised possessors of uncut stones render themselves liable. In South Africa, for example, monopoly rights are so zealously protected that even the casual finding of a rough diamond could lead to an official in-

vestigation of such rigour and intensity that undoubtedly the safest and wisest course would be for the discoverer to say nothing and throw the offending stone away—even if he happened to be the owner of the land on which it was found!

In these somewhat sombre circumstances, a natural tendency among treasure hunters would be to refrain from advertising their plans or openly discussing their prospects—unless, of course, there was some urgent reason for so doing, such as the need to raise additional funds. And still less would they be advised, if by some happy chance they achieved their aims, to draw any unnecessary attention to their success, lest their newly acquired riches, having by some undisclosed means escaped confiscation abroad, were to be declared liable to taxation at home, or to give rise to a spate of claims from insurance companies (in cases of marine salvage) or other interested parties (heirs, landowners and the like). Nor are these the only conceivable risks which need to be guarded against, for there is always the possibility that their activities may have attracted the attention of some professional thief, who, in their moment of triumph, might also join in the rush to relieve them of their hard-won gains.

All things considered, there would appear to be compelling reasons why finders of treasure should keep silent about their good fortune, from which it follows that there can be no guarantee that any particular hoard, supposedly still awaiting discovery, has not been secretly found and as quietly taken and disposed of—an ever-present danger which must be accepted as yet another of the many occupational hazards which surround the undertaking.

## II

It is clearly desirable that the amount of any anticipated reward (due allowance having been made for the inevitable exaggeration of its worth) should give promise of an adequate return for the time, effort and money that are to be expended in any given enterprise. It will also be apparent that both the nature of the venture and the knowledge and experience of those taking part, will have a considerable bearing on the all-important question of cost. If, where a search is to be conducted on land, members of the party are familiar with the country concerned and able to speak the language of its inhabitants, the hiring of guides and interpreters will be one expense which can be avoided. Similarly, where there is a call for a sea voyage with the promise of diving operations at the end of it, the wage bill will be much reduced if some members of

the expedition are able to sail the ship and others are experienced in the use of underwater apparatus.

Even so, realistic estimations of cost are likely to have a decidedly sobering effect. The late A. Hyatt Verrill,<sup>135</sup> who, in the course of a long and colourful career spent in investigating the ancient civilisations of the Americas, engaged in a number of professional treasure hunts, both on sea and on land, has some useful comments to make in this connection. In terms of present-day values, he puts the cost of a modest maritime adventure at anything up to £20,000 and warns that thanks to unforeseen happenings—storms at sea, accidents to equipment, sickness among personnel—the final reckoning may well be a great deal more. Land expeditions which are relieved of the expense of purchasing or chartering a special ship may be expected to cost less, though here again it is surprising, not to say disconcerting, how the various items of expenditure mount up, especially if men and materials have first to be sent overseas and then transported over difficult country. On the other hand, to set off into the wilds of some distant land without sufficient preparation and resources would be to invite failure, if not disaster, and the ironic fact thus emerges that, with the possible exception of purely local enterprises, organised treasure hunts are clearly not for those who need the money.

P. Pringle<sup>108</sup> has remarked that if all the sums expended on searching for buried riches could be recovered, they would constitute the greatest treasure of all, and certainly the ability to regard with equanimity the probability of failure would appear to be a necessary prelude to any large-scale search for hidden wealth, if only because all the available evidence suggests that the promoters of these undertakings so often emerge empty handed. Even in the most favourable circumstances, where there is a complete lack of official interference, no shortage of funds and at least some reason to suppose that a sizeable fortune is to be had for the taking, the prize may yet remain tantalisingly out of reach, as the long sequence of events on Oak Island, Nova Scotia, goes to show.

More than 150 years ago, three youths engaged in exploring the island came upon a clearing in which stood a lone oak tree, from a partly sawn-off limb of which there dangled a length of rusty chain, almost directly over a circular depression in the ground below. A block and tackle was found near by, and in response to an invitation so clear and unmistakable, the boys returned to the spot the next day with spades and shovels, with the aid of which they quickly established the existence of a filled-in shaft, roughly

circular in shape and some twelve feet in diameter. Excitement rose high when, at a depth of ten feet, something solid was struck, but on investigation the obstruction proved to be merely a timber bulkhead. Ten feet lower down, a second layer of boards was found and when, at a depth of thirty feet below ground, a third such platform was encountered, the discouraged youths gave up.

This was in the year 1795, and during the past century and a half, a score of syndicates and companies have sought in vain to learn the secret of the mysterious pit. Those concerned in the first of these organised attempts eventually reached a depth of ninety feet, at which juncture the excavation filled with water to within twenty-five feet of the top. Subsequently, exploratory drillings through the base of the flooded shaft brought up fragments of gold and revealed the existence of what appeared to be an underground room, encased in timber and cement. But all efforts to remove the flood water by bailing and pumping failed, and secondary pits dug near by also filled with water—with salt water, which rose and fell with the tide. A growing suspicion that the inundation was not accidental, but that it must have been deliberately contrived, was confirmed when a search led to the discovery of tunnels connecting the bottom of the original pit with the contents of Mahone Bay, wherein the island is situated.

To date, the problem of reaching the flood-protected subterranean chamber has not been solved, despite the introduction of modern techniques and the use of up-to-date equipment. A. B. C. Whipple<sup>141</sup> has recently estimated the total cost of the enterprise, thus far, to be in excess of half a million pounds—half a million pounds, hopefully expended in a series of vain attempts to recover no one knows what from a hole dug by no one knows who!

It should in fairness be added that, at the time of the discovery of the pit, local inhabitants are said to have recalled childhood memories of strange lights having been seen on the island by observers on the mainland, who suspected the presence of pirates. But this was all that the first of the treasure seekers had to go on, apart from the existence of the pit itself. Since then, of course, it has been held that the intricate flooding arrangements which were encountered provide convincing evidence in support of the belief that something of extraordinary worth awaits a finder. But the very effectiveness of these elaborate precautions can also be used as an argument against this thesis. If some rich booty was concealed in the pit, precisely how did those who buried it ever hope to retrieve it? And why, after going to such lengths to safeguard

the contents, did they then proceed to draw attention to the existence of the hiding-place by leaving behind a sign-post in the shape of a lone and conspicuous tree, exhibiting a shortened limb with a tell-tale length of chain dangling from it?

### III

J. B. Tavernier<sup>131</sup> has recorded that it was the custom of potentates in the Kingdom of Assam to bury much of their wealth, as an insurance against the possibility that, *post mortem*, they might return to this life in the guise of some poverty-stricken mendicant, in which unhappy event they would be able to draw upon the emergency resources which their foresight had provided. But to the treasure hunter, it is clearly not enough that hidden riches should exist, or even that they should be known to exist: what is required is some positive indication of their whereabouts. At best, however, such information as is available is likely to consist of a confused mixture of fact and fiction, in which the last-named may with confidence be expected to predominate. Where a story has any genuine basis at all, details of how the sought-for riches came to be lost or secreted must have come from one or more participants, from which verbal or recorded beginnings a somewhat garbled version may be expected, as likely as not, to have eventually found its way into print, with the inevitable result that the story is now represented by a dozen or more highly embellished and conflicting accounts. The literature is full of such contradictory retailings and, incredible though it may seem, many a costly search would appear to have been inspired, undertaken and directed by nothing more substantial than one or other of these ill-furnished accounts.

On the other hand, anything relating to hidden treasure which purports to be an original document needs to be treated with even greater reserve, for, human nature being what it is, the supply of these supposedly unique testimonies tends to keep pace with the demand. In consequence, any proffered maps and their accompanying instructions, with very few exceptions, can safely be dismissed as worthless, though it may be conceded that much care and attention to detail usually go into their preparation, special consideration being given to the choice of locale and to the nature of the prize. Thus, an account of a £500,000 cargo of reclaimed rubber, lost among the mud flats of the Thames Estuary, could expect to command about as much interest and attention from the treasure hunter as the news that a no less valuable consignment of

scrap iron was to be found at the bottom of a horse pond in the vicinity of Leighton Buzzard. And deservedly so. The lure, to be effective, must concern doubloons and pieces of eight, pirate loot and Incan gold, cunningly concealed in the dark depths of some distant cave, or safely buried beneath the coral strand of a lonely, tropical isle.

Given these essential ingredients, the associated story appears to matter so little that it almost invariably follows a familiar and well-established pattern. It may with advantage be coupled with some outstanding event in world history, such as the Fall of Rome, the French Revolution or the Battle of Chattanooga, for nothing is so comforting and reassuring as a well-attested date which can be verified merely by glancing at some standard work of reference. And it is often considered desirable to make the hero of the tale a noted and popular figure, *e.g.*, Alexander the Great, Sir Henry Morgan, the Hunchback of Notre Dame. But for the rest, almost anything will suffice. It is enough that the supposed treasure came to be hidden or mislaid and the knowledge of its whereabouts providentially handed down. As for the present owner and purveyor of the secret (who, poor fellow, has never been able to afford the fare to enable him to recover this vast store of wealth for himself), he received the details from a grateful stranger he once had occasion to befriend, to whom the information had been bequeathed by a native chief as he lay dying of thirst one exceptionally hot August day in some remote and nameless desert.

Such bogus directives are two a penny, or at any rate two for £100, and are produced by the unscrupulous for the benefit of the uncritical in the expectation that those who yearn for information about buried treasure may be relied upon to believe almost anything. Hence, in days gone by, the countless quests for the Philosopher's Stone, the City of the Caesars, the Fountain of Health, the Golden Temple of Doboyba and a host of other such phantom El Dorados. And hence, at the present time, the lively interest that continues to be shown in the non-existent booty of Captain Kidd, in the mythical Kruger Millions and in the missing half of the Cullinan Diamond, alleged and supposed.

## IV

But by no means all tales of hidden treasure are as baseless as these and, in the pages which follow, the available evidence relating to a representative selection of half a dozen reputed sources of riches is presented for consideration and examined in the light of

attempts which have been made at recovery. From this analysis, it will be apparent that at least three crucial questions face the would-be discoverer of hidden wealth: Is the report of its existence genuine? Are the details of the supposed location reliable? Does it still await a finder? And here, it will be evident, there is encountered the frustrating fact that the more precise and accurate the available information, the less likely is it to prove of value to those who essay to make use of it. For if it provides a trustworthy guide, how, then, does it happen that it has not already served its intended purpose?

To this pertinent question there are a number of ready answers, exhibiting varying degrees of plausibility. It may be that the relevant documents, after remaining hidden for centuries, have recently come to light (consider, for example, the dramatic finding of the Dead Sea Scrolls); or that the nature of the difficulties which surround the enterprise is such that earlier failures to secure the prize can be attributed to a lack of the necessary equipment (in the guise of such modern aids as the helicopter, aerial photography, electronic metal detectors, aqua lungs and underwater television cameras); or that the wording of the directions, seemingly given in plain English and to all appearances straightforward enough, is actually in code (C. L. Collenette<sup>28</sup> describes two treasure charts, relating to the same booty, in which the compass directions are exactly reversed, south-west in the one reading north-east in the other, all the clues being so contrived that in each case the hiding-place, when plotted on the map, is to be found on land and not in the midst of an adjacent ocean); or that, with the passing of time, the topography of the region concerned has changed to such an extent that certain vital landmarks are difficult to identify and may, indeed, no longer exist (as when the writer, intent upon following the directions given in an A.A. route, was led hopelessly astray by the trite circumstance that a set of tram lines, specifically mentioned in the text, had been carelessly removed by some interfering local authority).

To the always hopeful treasure seeker, the acceptance of one or more of these reassuring possibilities is at any rate preferable to the dismal alternative of acknowledging that the promised riches no longer (or never did) exist. Moreover, on occasion, such faith may well be justified, as Heinrich Schliemann demonstrated when, acting on the information given by Pausanias in his *Periegesis* (which the sceptics had persistently ignored down through the centuries), he searched for and found at the hilltop fortress of

Mycenae the ancient shaft graves which the Greek geographer said existed there—and in them a small fortune in gold and silver objects.

Nor will the treasure hunters of to-morrow have any reason to complain about a lack of opportunity to exercise their ingenuity and their talents. Already we are being regaled with accounts of the private fortunes which were amassed and concealed by Hitler, Mussolini, Rommel and the rest, and such is the uncertainty of the times that much wealth undoubtedly continues to find its way into a variety of hiding-places for safe keeping. Outstanding among these modern hoards is the greatest accumulation of gold ingots the world has ever known, worth an estimated £8,000,000,000. For the benefit of an incredulous posterity, its precise location is here given: It lies buried, deep underground, at a point 600 miles inland from the Atlantic coast of the North American continent, some thirty miles south-west of the town of Louisville, in Hardin County, Kentucky. The actual site, which at the time of this writing happens to be occupied by a detachment of U.S. mechanised cavalry, is called Fort Knox. . . .

## CHAPTER TWO

### THE ATAHUALPA RANSOM

*Proposition: That with the murder of Atahualpa, many tons of gold and silver, intended to supplement the captive Inca's ransom, were promptly hidden by the bearers of this treasure, which still awaits a finder.*

#### I

AT THE beginning of the 12th century, Sincha Roca, the leader of a small group of Quechua Indians inhabiting the Cuzco Valley in Peru, embarked upon an ambitious programme of conquest, aimed at the subjugation and assimilation of neighbouring tribes. This purposeful policy of expansion was continued by his descendants, with such success that the Inca Huayna Capac, the last of his line to reign over an undivided kingdom before the coming of the Spaniards, found himself the absolute ruler of some 10,000,000 subjects, who occupied a realm 380,000 square miles in extent, which included virtually the whole of present-day Peru and a considerable area of the now independent South American states of Chile, Bolivia, Ecuador and Argentina.

Supplies of gold and silver were superabundant in this extensive domain, but though, in the course of centuries, great quantities of these metals were steadily accumulated, neither was used as a circulating medium, for the peoples of the Incas were not commercially minded and they had no knowledge of money. Both metals, however, found lavish use in the furnishing and decorating of state buildings, royal palaces and religious institutions. At the capital city of Cuzco, into which, according to reliable native *quipu*-records, gold poured from the mines at the rate of 7,000,000 ounces annually, the famed Temple of the Sun eventually became so enriched under the benevolent patronage of successive monarchs that it received the name of *Coricancha*—The Place of Gold.

According to accounts given by those who were vouchsafed a sight of this establishment before its destruction, the premises were aptly named. A broad frieze of gold ran right round the outside stonework of the building, while its interior was ablaze with the glint of the same metal. Countless plates covered the walls, among them an immense disc of the Sun, the gleaming rays of

which were tipped with silver. Priceless ceremonial objects were everywhere to be seen, including a dozen silver vases, so large that a man could not encircle them with his arms. Here, too, were housed the life-size golden statues of long-deceased Incas, together with the mummified remains of the august rulers themselves, each richly attired and resting upon a gilded throne. Nor was this by any means all. Attached to the temple was a garden, replete with golden fountains fed by water which flowed along silver channels and stocked with metallic replicas of plants and flowers so skilfully contrived that ears of truly golden corn were but partly revealed by enclosing leaves of silver, topped by tassels of the same ductile material.

Less than thirty years after the discoveries of Christopher Columbus, rumours of a fabulous land to the west, where the inhabitants, though they knew not iron, made free use of gold and silver, began to reach those adventurous Spaniards who had entrenched themselves in the newly founded isthmian settlement of Panama (an Indian word, meaning 'plenty of fishes'). And after undertaking some preliminary coastal explorations, one of them, by name Francisco Pizarro, in partnership with Diego de Almagro and the ecclesiastic Hernando de Luque (though not, on this occasion, accompanied by either of his two associates), set sail early in January, 1531, on what was destined to be the third and last of his expeditions aimed at the conquest of Peru.

The invaders, less than 200 men in all, were outnumbered, had they but known it, by many thousands to one. But in addition to the immense superiority of their arms, their equipment included twenty-seven horses, the importance of which animals can hardly be overestimated. How fearsome a novelty they were to the Indians will be evident from an incident which occurred when Pizarro and a small party of men, after landing somewhere along the coast and making their way inland, turned to find themselves cut off from their ships by a hostile force of 10,000 natives. Ludicrous though it may seem, the situation was saved by one of the cavaliers accidentally falling from his mount. This unexpected sight so unnerved their opponents, who had apparently taken it for granted that, centaur-like, rider and mount were one, that the trapped Spaniards were permitted to escape without further hindrance!

Pizarro and his men also had the good fortune to appear on the scene during a period of civil strife. The Inca Huayna Capac, who had consolidated the conquests made by his father in the neighbourhood of Quito (Ecuador), duly received the daughter of the

local chieftain as one of his concubines, by whom he had a son called Atahualpa. He grew so inordinately fond of this boy that, on his death-bed, he decreed that Atahualpa should rule over the former Kingdom of Quito and that Huascar, the rightful heir, should govern the remainder of the Empire. The unwisdom of this decision soon became evident, for within a few years the two half brothers were at war with one another, in which struggle for supremacy Huascar was ultimately defeated and captured.

So it came about that, not long thereafter, the victor, made confident by his success and surrounded by contingents of his triumphant army, unconcernedly awaited the arrival of the handful of Spaniards, as they were allowed to make their way without molestation to the inland town of Caxamalca (modern Caxamarca). Here, after professions of friendship had been exchanged, a meeting was arranged. And here, the unsuspecting Atahualpa walked into the trap which had been prepared for him. For, at a given signal, the invaders fell upon the unarmed Indians, slaughtering several thousand of them and making prisoner their revered and supposedly divine leader.

In the uneasy truce which followed, the hostage Inca was not slow to perceive his captors' insatiable greed for gold, an observation which prompted him to make an amazing proposal. To the at first incredulous Pizarro, he offered, in return for his freedom, to fill with objects of gold the room in which he stood and twice to fill a smaller adjoining room with items of silver, stipulating only that he should be given two months in which to arrange for the collection and delivery of the treasure. A bargain having been made accordingly, royal couriers were despatched to the four quarters of the Empire, carrying the necessary instructions in regard to the ransom.

In the meantime, news of what was afoot reached the ears of Huascar, who, though still a prisoner himself, contrived to send a message to Pizarro to the effect that Atahualpa, as a native of the distant province of Quito and a stranger to Cuzco, knew little about the riches to be found in the capital city and that he, the rightful Inca, would double his rival's offer, if only the Spaniards would effect his rescue!

As might be expected, Atahualpa learned of this move with considerable dismay, and he was still more concerned when Pizarro announced that he intended to bring Huascar to Caxamalca, that he might judge the merits of the claims of the two contenders for the throne. In this, however, the Spanish commander was fore-

stalled, for the next intimation he received was that the unfortunate Huascar had met his death by drowning in the Andamarka River. . . .

Atahualpa's couriers had now been gone for several weeks and the eagerly awaited consignments of gold and silver were at last beginning to arrive, though hardly quickly enough for the impatient Spaniards, who now suspected that their prisoner was merely playing for time while his emissaries roused the countryside. The Inca, however, indignantly denied that such was the case, and suggested that the Spaniards should send their own representatives to Cuzco, to see for themselves. Pizarro at once agreed to this and, under a safe conduct, accompanied by guides, three of his followers undertook the journey, in due course returning not only with reassuring news about the supposed massing of armies against them but also with much booty. They had found the Temple of the Sun bursting with treasure, and had personally supervised the removal of no less than 700 plates of gold from its walls, while hauls from other buildings in the city had brought the amount of loot up to 200 loads—plus a cargo of silver!

All this made a valuable addition to the ever-growing ransom, which was now nearing the quantities agreed upon. But in the meantime, another reconnaissance party had also returned, the bearers of less-satisfactory tidings. This group had been led by Hernando Pizarro, who had been sent by his brother to Pachacamac, a coastal town famed for its temples, from within the sacred precincts of which it had been anticipated that great riches would be forthcoming. But the would-be despoilers had arrived to find most of the valuables gone, removed to places of safety by priests who had been warned of their coming—an ominous turn of events which suggested that, while the Spaniards idly awaited the promised ransom, treasures greater by far were being concealed all over the country.

The inactivity of the invaders had been forced upon them by the inadequacy of their numbers. But the return of the Cuzco party to Caxamarca had also been preceded by the timely arrival of Pizarro's partner, Almagro, accompanied by strong reinforcements, so that a general advance to the capital, as a necessary prelude to the conquest of the Empire, was now possible. There remained only the question of the division of the ransom and of the disposal of the person on whose behalf it had been collected.

Prior to the share-out, the accumulation of gold and silver was melted down—a task which, though it went on ceaselessly day and

night, required a month to complete. And when at last it came to be counted, it was found to amount to the stupendous total of 1,326,539 *pesos de oro* and 51,610 *marcos de plata*, a sum, in terms of present-day values, in excess of £5,000,000. Even in those days, of course, monetary values were much higher in Spain itself than in the newly acquired possessions overseas, where, in the absence of coinage, the gold peso (known also as the *castellano*) constituted one-hundredth part by weight of the Spanish pound. Thus Pizarro and his companions found themselves with their pockets full of gold, but with little or nothing to spend it on. Francisco de Xerxes, whose share of the ransom amounted to 362 silver marks and 8,880 gold pesos, had good reason to complain of the high prices which everywhere prevailed—10 pesos (£50) for a quire of paper; 40 pesos (£200) for a pair of shocs; 100 pesos (£500) for a cloak; 2,500 pesos (£12,500) for a horse!

Atahualpa now began to demand his promised freedom. But, though his captors acknowledged that he had kept his part of the bargain, it soon became evident that they were not disposed to keep theirs. The Spaniards feared, perhaps with good reason, that to release the victim of their treacherous kidnapping would be to invite well-deserved reprisals. On the other hand, if they continued to keep him captive, the prevention of his rescue, after such an exhibition of bad faith on their part, would require the maintenance of a guard far stronger than could be spared for so unproductive a purpose. So the problem was resolved by what amounted to cold-blooded murder. The luckless Atahualpa was brought to trial on a number of trumped-up charges, solemnly pronounced guilty and sentenced to death. He was executed by garrotting on 29 August, 1533—one of the blackest of many dark deeds which occurred during the conquest of the Americas.

The Spanish sovereign, in return for his gracious permission to exploit and rob the peoples of the New World ('Get gold, humanely if you can, but at all hazards get gold'\*) ostensibly received from the plunderers one-fifth of all their takings. No doubt His Hispanic Majesty was often cheated, but even so, trustworthy minimum values are readily calculable from the official returns. And from the reliable figures provided by the records of the royal *quinta*, it would appear that the total amount of booty secured by Pizarro and his followers during the first two years of their Peruvian rampage must have amounted to more than £10,000,000!

\* Exhortation of Ferdinand, King of Spain, in his letter to the colonists of Hispaniola, 25 July, 1511.

The golden tide, however, soon began to turn. Once the perfidy of the interlopers had become evident, the natives began to hide the gold and silver objects to which their enemies so inexplicably attached such great importance, and the death of Atahualpa was the signal for vast amounts of treasure to disappear into a multiplicity of hiding-places. Some of these hoards were actually a part of the ransom and were wending their way to Caxamalca when their journey was halted by the news that they could no longer fulfil their intended purpose. The Spaniards also learned to their chagrin of the disappearance of an immense gold chain, fashioned, so it was said, at the command of Huayna Capac in honour of the seventh birthday of his legitimate son and heir, Tupac Cusi Hualpa, better known thereafter by the sobriquet of *Huascar*, a word signifying cable. More than ten tons of gold are supposed to have gone into the making of this outsize bauble, which was described as having links the thickness of a man's wrist and to be a hundred yards or more in length. According to the contemporary historian Augustin de Zarate,<sup>150</sup> the chain was held in the hands of an assembly of nobles during the performing of national dances in Cuzco's great square.

Pizarro and his men made determined efforts to locate this massive ornament, but even a judicious torturing of the local citizens failed to elicit exact information as to its whereabouts. Seemingly, it had been cast into a lake for safe keeping—into Lake Titicaca, according to one report; into Lake Urcos, according to another; and into some nameless body of water, according to a third. Garcilasso de la Vega, whose father was one of the *conquistadores* and his mother an Incan princess, claims to have been given details of the chain by an aged uncle and recounts how, in later years, a number of Spanish merchants stationed at Cuzco attempted to drain Lake Urcos by driving a tunnel in the direction of the Yucay River. The work is said to have been begun in 1557, but, after excavating for a distance of fifty paces, the tunnellers struck hard flint and the undertaking had to be abandoned.

Another and reputedly much more valuable treasure from Cuzco is supposed to have been hidden in the Mountains of Azangaro and the secret of its whereabouts handed down from one appointed guardian to the next. Felipe de Pomares would have us believe that some three centuries after its concealment, a venerable Cacique of Chinchero, by name Mateo Garcia Pumacagua, lacked the funds necessary to provide arms and ammunition for a revolt he was planning against the Spaniards. On being sworn to secrecy

by the keeper of the treasure, he received the promise of sufficient gold for his needs and was led, blindfold, to the hiding-place during the night hours. In the course of the journey, he waded (or was rowed—the accounts vary as to this) up the Huatanay River, until suddenly, his blindfold removed and a light presumably having been struck, he found himself dazzled by the glint which emanated from an enormous heap of golden vessels, statues and ingots. Not long thereafter, so the story goes, the obliging custodian of this particular hoard died before he could pass on the secret of its precise whereabouts, while Pumacagua's attempted revolt ended disastrously in his defeat by the Spanish General Ramirez, by whom he was taken prisoner at Umachiri in 1815 and hanged.

Also intimately associated with stories of Cuzco's vanished riches is the nearby mountain fortress of Sachsahuaman, situated high above the city—a giant complex of stone, with a triple terrace of massive walls which run a zig-zag course along its northern side. Within this extensive enclosure there are natural fissures in the limestone rock, some of which, enlarged and extended by the Incas, gave access to the *Chingana* or Labyrinth, a maze of subterranean passages which extended as far as Cuzco and led to various buildings in the city.

According to tradition, there also exists a secret underground vault, connected with both city and fortress alike, wherein are to be found many of the valuables missing from the Temple of the Sun, among them the golden statues of the Incas aforementioned. Report has it, indeed, that Dona Maria de Esquivel, wife of Don Carlos, the last of the Incas, was granted a sight of this treasure after making unceasing complaints that she had been deceived into marrying a poor Indian who boasted the empty title of Inca, but who lacked the means to maintain her in the manner to which she was accustomed. One night, the exasperated husband bandaged his wife's eyes, turned her round several times, then led her by the hand for a matter of 200 paces and, after guiding her down some steps, removed the head covering. The astonished lady found herself in a large quadrangular hall, surrounded by so vast a collection of gold and silver objects that, momentarily at any rate, she was bereft of speech.

These stories are of interest in view of a series of events which have occurred subsequently. While in the vicinity of the ancient fortress, report has it, an Indian accidentally fell down a hole in the rocks and, after wandering aimlessly in total darkness for several

days, at last emerged from the lower regions of the Jesuit Chapel of La Compania in Cuzco, a building occupying a part of the site where once stood a residence of the Inca Huayna Capac. The fellow clutched an ornament of gold in one hand and was full of delirious talk of treasure-filled caverns, but died before he could give a coherent account of his ordeal. The incident led to a spate of youthful exploration, and several of those who ventured into the depths experienced great difficulty in finding their way out again. In the end, three students lost their way completely and perished miserably of starvation, whereupon General San Roman, the town Prefect, had the offending passages sealed up—though not before a couple of young adventurers, if the account they afterwards gave of their exploit is to be believed, had made their way so far underground that they found themselves beneath the site of the Temple of the Sun, where now stands the Church of San Domingo and clearly heard the chanting of the mass overhead!

No doubt, in the days immediately following the Conquest, many stories of hidden gold were invented by the Indians for the express purpose of tormenting their tormentors. But even so, and despite the fabulous amount of the riches known to have been collected, there is no reason to suppose that Pizarro and his followers succeeded in laying their vandal hands on the whole of the accumulated wealth of the Incas, or even on more than a fraction of it, if the remark reported by G. F. de Oviedo, made by an Indian nobleman to Sebastian de Benalcazar, the conqueror of Quito, is to be taken seriously. Referring to the Atahualpa ransom, the prince commented:

*That which the Inca gave to the Spaniards was but a kernel of corn, compared with the heap before him.*

It may be accepted, indeed, that much treasure was hidden from the invaders, if only because they themselves later succeeded in recovering considerable quantities of it. Not only were some of the valuables which Hernando Pizarro failed to find at Pachacamac subsequently unearthed in the vicinity of the temples to which they belonged, but Polo de Ondegardo, during his governorship of Cuzco, retrieved large quantities of gold vessels and ornaments from various hiding-places within the city. And that yet other hoards remained undetected was convincingly demonstrated by the fact that the whereabouts of a number of them was on occasion voluntarily disclosed to the authorities—though not, it need hardly be said, without an ulterior motive.

Thus, with Huascar's death, the legitimate heir to the kingdom was another of his half brothers, Manco Capac, and, after the Spanish occupation of Cuzco, this young prince was placed on the throne in an attempt to pacify the people. The new Inca soon discovered, however, that he was to be a leader in name only, whereupon he fled with the intention of promoting a general uprising. But he was pursued and recaptured and was thereafter confined to his quarters. Subsequently, conditions were eased for him by Hernando, who made every effort to gain the friendship of the royal captive. In response to these overtures, the wily Inca, though still intent upon revolt, endeared himself to Hernando by revealing the whereabouts of a succession of treasure hoards which had successfully escaped detection. When he had in this manner gained the full confidence of his captors, Manco casually mentioned the existence of a cave, hidden deep in the Andes, where there had been concealed a golden statue of his father and suggested that he be sent to recover it. The ruse succeeded and, in the uprising which followed the Inca's escape, the Spaniards in Cuzco were closely besieged for half a year and were all but defeated.

## II

There are many accounts concerning contributions to the Atahualpa ransom which, with the news of the death of the Inca, disappeared while *en route* for Caxamalca, and these range from a popular rumour, long current, that the contents of one llama train, consisting of 7,000 animals \* each carrying 75 pounds of gold, were concealed in a cave in the vicinity of Piscobamba, to revelations of much more recent origin. Thus Anthony Phair,<sup>106</sup> in what purports to be a factual account, has described how, when as a merchant seaman he was spending some time ashore in Manaos in 1951, he had occasion to save an elderly citizen from being run down by a drunken driver. Over a subsequent drink together, the rescuer felt himself obliged to decline a proffered gift of a considerable sum in American dollars, with which currency his companion appeared to be plentifully endowed. Not to be denied the pleasure of rewarding his newly found friend, the old man then insisted upon passing on the secret of the source of his riches. He claimed that he knew the location of a considerable portion of the Atahualpa ransom, from which hidden hoard he had obtained sufficient gold to maintain him in comfort for the rest of his life.

\* Not a particularly large convoy, some of which are known to have consisted of as many as 25,000 animals.

He went on to describe in detail the whereabouts of the treasure, which was to be found in the *Territorio do Acre*, a region about half the size of England, and gave verbal directions as to the route to be followed. No map was provided—merely a description of a series of eight distinctive landmarks, the last of which was in the shape of three small hills, approached by way of a dry river bed which terminated in a tunnel.

Persuaded that the old man was telling the truth, Phair decided to form an expedition and, with this in mind, he left the Merchant Navy and undertook ranching work in Canada. A year or so later, in October, 1952, having saved sufficient money for his purpose, he sailed in the *Ascania* for Liverpool, where, on arrival, his story received such publicity that he was inundated with letters from would-be treasure seekers from many parts of the world. Of the five applicants of various nationalities finally selected to accompany him, all but one subsequently dropped out, and he eventually made the trip accompanied by Hendrik Goebert, a Dutchman.

Phair journeyed to Cuzco, where he was joined by his companion, and together they went on to Pisac, to Marcapata, to Oranda and thence northwards, following the course of the *Rio de los Piedras*, in accordance with his informant's instructions. The fifth landmark, not far from the location of the treasure, was a great cataract, more than 100 feet high, which was duly found. The sixth was a distinctive group of rocks standing in mid-stream, and this was also discerned. Thereafter, at the junction of two rivers, the trail turned westwards, along the bank of a waterway referred to by the old man as the *Rio de Sangre*. Phair and his companion, though still in Peruvian territory, now found themselves skirting the Brazilian border, and in due course reached the seventh landmark—a high and distinctive rock, black in colour and taller than the surrounding trees. But at this juncture, when almost within reach of their goal, the intruders received abrupt and unmistakable evidence that their every movement was being carefully watched, nor were they left in any doubt that their presence was resented. Seemingly, the local Indians had divined their intention, or at any rate considered their presence unwelcome and, either way, there was nothing for it but to return empty handed.

Phair concludes his account by expressing his intention of organising another expedition, with what result we shall perhaps some day learn. In the meantime, the classic story of Incan treasure, well documented and seemingly factual enough, concerns an immense quantity of gold believed to have been concealed at the

time of the Pizarro invasion in an artificial lake lying somewhere among the now slumbering volcanic peaks of the wild and inhospitable Llanganati Mountains, in the Quitoian Andes of Ecuador. It concerns, too, the subsequent marriage of one Valverde, an indigent Spaniard, to an Indian girl who was a native of those parts and whose story, though well known locally since the occurrence of the events in question, received world-wide prominence through the chance interest of a British naturalist, the Yorkshireman Richard Spruce,<sup>126</sup> famous for his travels in Amazonia from 1849 to 1864.

Some years after the death of Spruce in 1893, his extensive notes, prior to publication, were edited and condensed by Alfred Russel Wallace, who, happily, if somewhat incongruously, tacked on at the end of them the story of the so-called Valverde treasure, complete with a map. The account tells how Spruce first heard mention of the Llanganati Mountains, and of the treasure which was supposed to be hidden among them, when he reached Banos in 1857. Here, he encountered two men who claimed actually to have searched for the gold and to have lost their way and almost their lives in so doing. Their activities, it appeared, were prompted by the tradition that not long after his wedding, Valverde, from being a poor man, suddenly became possessed of great wealth—it being popularly supposed that his wife's father knew the whereabouts of a hidden treasure and that he had accompanied his son-in-law to its place of concealment on more than one occasion. Be this as it may, it was an opulent Valverde who in due course returned to Spain and who, on his death-bed, most loyally bequeathed to his sovereign a *Derrotero*, or Guide, containing a detailed description of the route to be followed.

To Spruce, the whole story sounded so highly improbable that he promptly dismissed it from mind. But during the next year or two, his movements in search of botanic specimens were severely restricted by political upheavals, throughout which period of disension he found himself tied to the vicinity of Ambato and Riobamba, where all his goods were stored. Irked by this curtailment of his movements, Spruce occupied himself by enquiring more closely into the matter of the supposed treasure, in the course of which investigation, much to his surprise, he happened upon indisputable evidence that the truth of parts of the story, at all events, was not to be denied. For in days gone by, a copy of Valverde's instructions had in fact been sent by a Spanish monarch to the *Corregidores* (Chief Magistrates) of the Andean towns of

Tacunga (Latacunga) and Ambato, together with a *Cedula Real* (Royal Warrant), charging them to search for the gold on the King's behalf!

As he translated Valverde's instructions (or rather, a copy of them, for the papers received by the *Corregidores* had been stolen some twenty years earlier), the conviction grew upon Spruce that the document was as genuine as it was convincing. The follower of the directions, it transpired, when in the vicinity of the town of Pillaro, was enjoined to seek the Farm of Moya and to spend the first night of his journey well above it. Thereafter, enquiry was to be made for the Mountain of Guapa, a vantage point from the top of which, on a clear day, lying to the east in the form of a triangle, there could be observed the triple peaks of the Llanganati Mountains. It was in this region that there was to be found a lake made by hand, containing a large consignment of gold which, originally intended as a part of the Atahualpa ransom, had been hidden from the Spaniards when the news of the death of the Inca was received.

From the summit of Guapa, a more immediate landmark to be sought was a forest, containing groves of distinctive vegetation, designated *Sangurimas* and *Flechas*. By leaving this forest on the left, there would be encountered a wide morass a considerable way ahead and, beyond it, some cattle farms. After crossing the morass, the route turned left towards a *jucal* (an area of high grass) on a hillside, after passing through which there would be seen two small lakes known as *Los Anteojos* (the Spectacles), a name inspired by the fact that a narrow strip of land ran between them, not unlike the bridge of a nose. From this point, the three peaks of the Llanganatis would once again be visible in the distance and, by leaving the two lakes on the left, a suitable camping place would be discerned on an adjacent plain. Here, horses would need to be left behind.

Journeying now on foot, the traveller, after skirting a large black lake (which he was to keep to his left), would perceive that the trail, ran downhill to a ravine. This gulf could be crossed in the vicinity of a waterfall, over a bridge, if in existence still, built by Valverde himself out of three poles. In the midst of a forest on the far side, an abandoned hut would be observed—the site of the next camp.

Thereafter, the way led through the forest in the same direction as before, until soon another ravine, deep and dry, would bar progress, and this, too, would need to be bridged. Farther on, fragments of pottery, of Indian origin, would indicate the site of the fourth and last resting place on the outward journey.

On the following morning, the Mountain of Margasitas (pyrites) would be reached and this the treasure seeker was instructed to leave on his left, with the added injunction that the obstruction was to be circumvented in a particular fashion, as indicated by a hieroglyph, thus:



Pastureland on a small plain would then be seen, and this, on being crossed, would lead to a canyon between two hills, traversed by the Way of the Inca. The traveller was instructed to take to this ancient highway and to watch out for a landmark in the guise of a *socabon* (tunnel) with an entrance shaped like a church porch. Beyond the canyon, on the right-hand side, descending from an off-shoot of one of the Llanganatis, there would be seen a stream, cascading into a quaking bog. By climbing above this waterfall, the mouth of the tunnel could be reached, though it was warned that the opening might be obscured by the lush growth of herbs known by the name of *Salvaje*.

On the left hand of the mountain there would now be observed the remains of a furnace in which the ancients had performed their smelting operations and, to reach the end of the trail, it was directed that if it did not prove possible to pass in front of the tunnel it would serve just as well to venture behind it, as the waters of the treasure lake fell into it. Alternatively, if the traveller had earlier gone astray in the forest he should seek out and follow the right bank of the river until an impassable canyon was reached, at which point an adjacent mountain should be climbed, the comforting assurance being given that 'in this manner thou canst by no means miss the way'.

The royal recipient's opinion of the value of this unexpected inheritance was clear from the fact that he went so far as to institute the making of a search. And, in accordance with the King's commands, an expedition was organised, headed by the *Corregidor* of Tacunga in person and accompanied by a friar known as Father Longo. It at once became evident to the members of the party that the directions given in the Guide referred to actual localities and that it was obviously the work of someone who was familiar with the route they were following. All continued to go well until, after passing the great black lake, the expedition reached the vicinity of the waterfall and crossed the ravine to the site of the third camping

place. But here, with the end of their journey almost in sight, calamity befell: during the night, Padre Longo vanished, inexplicably and without trace. After a vain search which lasted for several days, the superstitious survivors convinced themselves that their companion's mysterious disappearance was intended as a warning which it would be most imprudent to ignore and, thus persuaded, they hastily retraced their steps, their mission unaccomplished.

On their return, the royal papers were deposited in the Tacunga archives and in subsequent years made available to all who wished to peruse or copy them until, in 1840 or thereabouts, someone repaid this privilege by resorting to theft. Spruce could find no one who remembered the date of the original documents, but he was informed that down through the years there had been many attempts to locate the gold, so far as was known without result.

It was at this point that Spruce recalled having been told, on the occasion of his visit to Banos, of a fellow naturalist, Don Atanasio Guzman by name, who had travelled extensively in the Llanganati region and who, from his home in Pillaro, had accompanied many expeditions into the mountains in search of the treasure. And although Guzman had been dead for about fifty years—accidentally killed while sleep-walking—he was said to have left a detailed map of the region, a map which Spruce now made diligent efforts to find. He learned at length that it was owned by Salvador Artega, a resident of Ambato, who obligingly sent to Quito for it, where it had been deposited for safe keeping, that Spruce might have a sight of it.

The Guzman map proved to be drawn on eight sheets of paper, pasted on to a calico backing which measured nearly four feet by three feet, and subsequent investigation showed that it provided a reasonably accurate portrayal. In addition to Cotopaxi, half a dozen other active volcanoes were depicted and given the names Mulatos, Siete-bocas, Jorobado, Margasitas, Zunchu and Topo, of which the three last-named were held to represent the Llanganati trio mentioned by Valverde in his Guide. Spruce satisfied himself that, although none of these six mountains had erupted in recent times, the district was unquestionably volcanic.

The various routes taken by Guzman and his associates in their search for the treasure were clearly shown on the map, one indication of their activities being the numerous soundings of lakes, given in terms of the Spanish-American *zara* (about 33 inches). As a botanist, the cartographer had also been at pains to distinguish

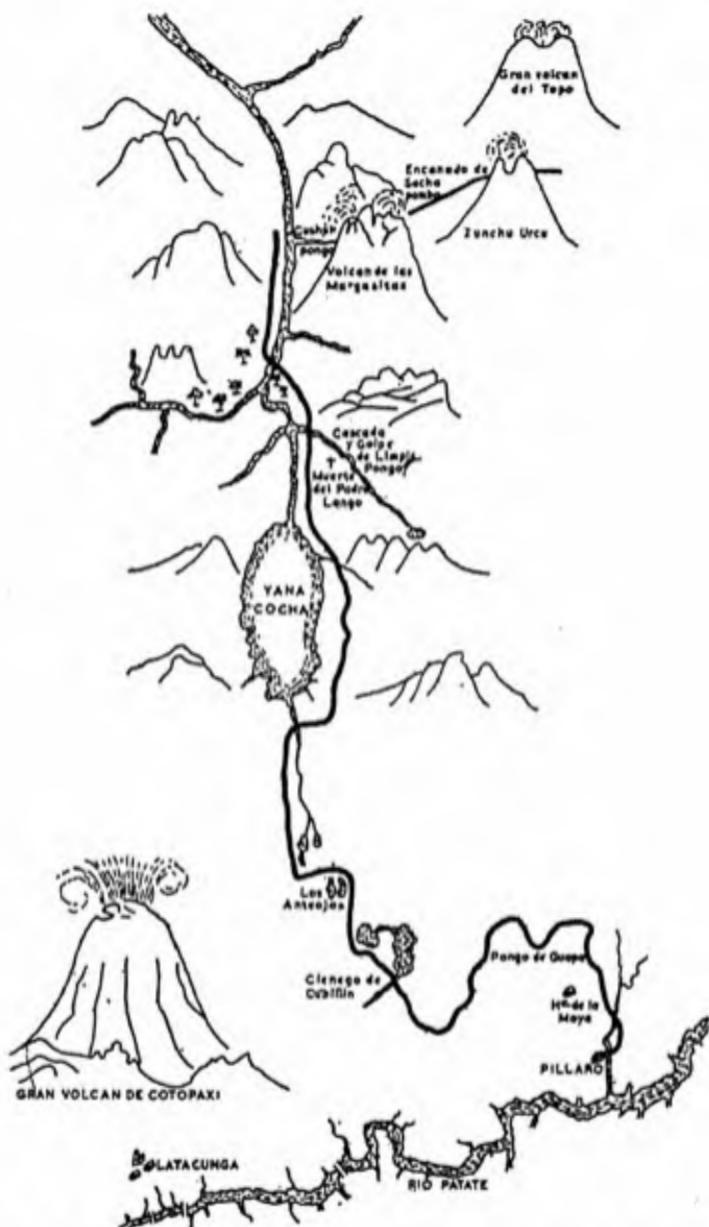
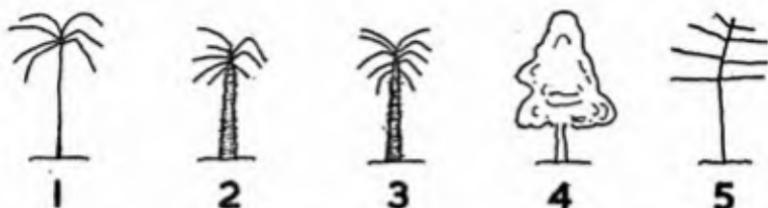


FIG. 1. The essence of the Guzman map of the Quitonian Andes, showing one of the several routes taken by the cartographer in his search for the Valverde treasure (with acknowledgements to the Royal Geographical Society).

between the different kinds of vegetation as he encountered them, using miniature representations which bore a recognisable likeness to their living counterparts and most of which Spruce was able to name without difficulty:



Thus, No. 1 he at once identified as the Wax Palm, Nos. 2 and 3 as varieties of Tree-ferns (Helechos), respectively a Cyathea and an Alsophila, while No. 4 was a representation of the Aliso (*Betula acuminata*). About No. 5, however, he was uncertain, describing it, with due reservations, as a Podocarpus.

Also shown on the map were the various landmarks mentioned by Valverde, and the existence of some of which Spruce was soon able to confirm. Pillaro was a small town on the Patate River, on the opposite bank to Ambato; the Farm of Moya was well known and at that time still in existence; the Mountain of Guapa could be observed in the distance; the *Sangurimas*, he learned, were trees with a distinctive white foliage, while the *Flechas* he identified as the giant arrow-cane (*Gynernium saccharoides*); the morass (marked *Cienega de Cubillin* on the map) undoubtedly existed, as did the area of tall grass (*jucal*) and the twin lakes likened to a pair of spectacles (*Los Anteojos*). Also found by Guzman, exactly as Valverde had described them, were the great black lake (*Yana Cocha*) and the waterfall (*Cascada y Golpe de Limpis Pongo*), in the vicinity of which there was a cross set up, inscribed *Muerte del Padre Longo*.

In his notes, Spruce gave the complete translation of Valverde's *Derrotero*, and this, together with his copy of the Guzman map, was published in London in 1908, since when the details, often considerably amended and embellished, have appeared in print on a number of occasions. Thus, in 1932, the story was retold by H. T. Wilkins,<sup>143</sup> in an account based on that of Spruce, to which due acknowledgement is made. But there are unwarrantable additions (as when Valverde is gratuitously furnished with the forename Juan) and some inexcusable omissions (where Spruce specifically mentions Pillaro and the Llanganatis, Wilkins, apparently seeking to introduce a note of mystery, refers to the 'town of

P.....' and to the 'mountains of L.....'). More confusing still, he illustrates his version of the story with a remarkable map bearing the legend *El Derrotero de Tesoro del Yngas*, obtained, we are informed, 'from a very rare MS. copy of the original guide'.

This copy must be rare indeed. It was at all events not seen by Spruce, who makes no mention of the Valverde documents furnishing anything in the nature of a chart. And although Wilkins adds that Russel Wallace also examined Valverde's chart and Guide, no such claim is made by Wallace himself. On the contrary, he was concerned merely with the editing of Spruce's notes, the author of which he commends in a foreword, not only for his discovery and translation of the Guide to the treasure but also for his enterprise in seeking out and obtaining permission to make a copy of the Guzman map, without which, says Wallace, '*both the Guide and the story of the search for the treasure would be unintelligible*'.

From this it is abundantly clear that the copy of the Guide seen by Spruce did not contain a map and it is difficult to escape the conclusion either that Wilkins has succeeded in deceiving himself or that he is intent upon deceiving others, particularly when, in giving what purport to be actual quotations from Spruce, he is guilty of making significant departures from the original text. Of several such mis-quotations, the following example speaks for itself:

*Spruce via Wilkins*

*Many expeditions, public and private, sought to follow the track indicated by the chart . . .*

*Spruce verbatim*

*Many expeditions, public and private, have been made to follow the track indicated by Valverde . . .*

As for the alleged Valverde chart, a glance is sufficient to show that it is based on the Guzman drawing, for not only does it exhibit some of that botanist's characteristic sketches of trees and give many of his figures relating to lake soundings but it actually indicates several of the false trails which were vainly followed by him in the course of his explorative wanderings!

Inevitably, the story of the map 'from a very rare MS. copy of the original guide' is echoed by other writers, among them A. H. Verrill,<sup>135</sup> who, although he makes mention of the discovery of the *Derrotero*, can hardly have seen Spruce's original account, judging by this and other departures which he makes from it. Thus he describes how Valverde was guided to the hiding-place of the

treasure, not by his father-in-law, but by his wife, who most romantically turns out to be an Incan princess. Again, although a lake is encountered in the centre of a bowl-shaped valley, the gold is not located underwater, but in a nearby cavern—reached through a cleft in the mountainside which, however, is shaped like the arched opening of a church door. Verrill even draws upon his imagination to the extent of listing the various items which go to make up the treasure and, after describing the many journeys made to and from the cave by the two visitants, adds the comforting assurance that so great was the amount of gold, silver and jewels, that these repeated depredations made no appreciable impression upon it. But as regards the location of the hoard, if nothing else, Verrill was influenced by conversations he had enjoyed with a fellow American, who had actually tried to find it.

### III

Not very much is known about the many searches which were undoubtedly made for the Valverde treasure from the time of the expedition led by the *Corregidor* of Tacunga to the publication of the Spruce account. But there is every indication that from time to time not a few of the local inhabitants took an active interest in the matter, among them the members of the several parties led by Guzman, while Rolf Blomberg<sup>13</sup> (of whom more anon) has recorded that a Governor-General Montes instigated another official search in 1812. Blomberg also lists some of the attempts to locate the gold which have been made since the beginning of the present century, among them those of Thour de Koos, Richard D'Orsay, Colonel E. C. Brooks and Captain Ernest E. Loch,<sup>79</sup> all of whom were presumably inspired by Spruce (this is certainly true of Brooks and Loch).

The Austrian de Koos, it appears, began by making a thorough investigation of the story, visiting Seville in order to search for documentary confirmation in the *Archivo de Indias*. He is said to have unearthed there the original of Valverde's *Derrotero*, but, however this may be, he was sufficiently encouraged by what he found to journey to Ecuador and to make several trips into the interior. Reportedly he discovered gold in a lake (a not unlikely event in that auriferous region) and returned to Europe with a view to arranging a more ambitious expedition, fully equipped with diving apparatus, only to die of pneumonia as he was about to embark for South America once again.

D'Orsay, a Franco-American, devoted several years to the

search, allowing himself nine months in the wilds, followed by three months of recuperation amid the comforts of Quito. His camp, regularly supplied from Pillaro, was established several days' march from this traditional point of departure, in the locality where the treasure was believed to be hidden. From here, the surrounding countryside was systematically explored. But D'Orsay failed to find what he was looking for, and in the end he was forced to return to the States in order to undertake the mundane task of earning more money with which to continue the search.

Colonel Brooks, another American, set off into the Llanganati Mountains in 1912, and it was he who later met A. H. Verrill, to whom he recounted some of the details of his adventurous life. After graduating from West Point, he had served in the U.S. Army during the Spanish-American War, at the end of which conflict he became Auditor of Cuba. Later, on his retirement from the Armed Forces, he acted as the South American representative of the American Bank Note Company of New York, an appointment he secured in 1909.\*

It was about this time that Brooks obtained a sight of Spruce's book and, in the words of Verrill, 'studied the copy of the ancient map of Senor Valverde', *i.e.*, of Guzman. 'The outcome was a decision to search for the treasure himself, but, as a complete novice in such matters and in blissful ignorance of the inhospitable nature of the country that lay ahead of him, he made the mistake of setting out inadequately equipped and during the worst season of the year. In these unfavourable circumstances it was not long before he was forced to turn back, though he was far from giving up. While waiting for the weather to improve, he gathered together such supplies and equipment as his recent experience had shown to be necessary, and then, accompanied by eight Indians (seven native Ecuadorians and a Peruvian half-breed), he set off once more.'

On this occasion he made relatively good progress and, like others before him, experienced no great difficulty in identifying the succession of landmarks described in Valverde's Guide and so reached the vicinity of the Margasitas Mountain. It was here that earlier searchers had been led astray by their interpretation of the

\* This date is not given by Verrill. It comes from W. Frederick Colclough, the present Chairman and President of the American Bank Note Company, who, in response to a request for information, was good enough to have a search made among the firm's old records. He then reported (private communication, 2 July, 1959):

*Our records indicate that a Colonel E. C. Brooks (Edward C.) Brooks did represent us in certain South American countries, including Ecuador, from 1909 until his death in 1922, except for an interval in 1917 and 1918.*

mysterious hieroglyph, regarding the precise meaning of which Brooks had given considerable thought. Seemingly, this cogitation had been to some purpose, for it was not long before he caught a glimpse of three snow-capped peaks, shining in the distance.

It was at this juncture that he first noticed the strange behaviour of his companions, who appeared exceedingly ill at ease and not at all anxious to go any farther—among other things, they warned that a heavy storm was impending. But Brooks, convinced that he was now almost within reach of the treasure, urged them on with promises and threats, until at last they reached the rim of a water-filled crater, located at the base of the triple peaks.

For reasons which are not explained, Brooks seems to have decided that the treasure was to be found, not in 'a lake made by hand', but in the nearby tunnel to which reference is also made in the Guide, though nothing is there said about entering it. He, moreover, expected to find the entrance, arched like the door of a church, somewhere among the cliffs which encircled the lake at his feet. But by this time it was late afternoon and, tired out by the day's exertions, he ordered camp to be made near the water's edge and then retired for the night.

He was awakened by the sounds of a tremendous storm and by shouts of alarm from the Indians, and leapt from his camp-bed to find himself knee deep in water. Torrents of water were pouring in streams down the mountainside, and it was evident that the level of the lake was rising rapidly. In a dash for safety, they all clambered up the surrounding slope and sought refuge in a small recess, where, drenched and half frozen, they spent the remainder of the night. The dawn revealed the full extent of their plight, for what had been a small and inviting pool was now a vast expanse of water, somewhere beneath the surface of which lay their food and equipment. Most of their stores had been washed away, and a ham and some tinned items were all that a frenzied search for provisions brought to light.

In this desperate plight the thought uppermost in Brooks' mind was the question of survival; and their only hope was to abandon all thought of the treasure and endeavour to go back the way they had come as soon as the weather permitted. The seven Ecuadorians anticipated this decision, for the next night they silently departed and, when Brooks awoke in the morning, it was to find that he and the Peruvian cholo were alone in the wilderness. Luckily, the weather cleared sufficiently to enable an immediate start back to be made. And more fortunately still, Brooks had had

the foresight to arrange for a relief party to begin looking for him, in the event of his not returning within a specified time—a precautionary measure to which he and his companion owed their lives, for it was while blindly wandering in a snow-storm, lost, worn out and at their last gasp, that their rescuers finally caught up with them.

Verrill relates that, to the end, Brooks held to his belief in the existence of the treasure and often discussed with him the possibility of arranging another search for it—plans which, with his death in 1922, were destined not to be fulfilled. And from Bloomberg we learn that tragedy, as well as failure, attended Brooks on his journey into the Llanganati Mountains for, prior to venturing into the wilds he had become enamoured of a charming Ecuadorian lady named Isabela, by whom he was accompanied on his adventure, but who, alas, did not survive the hardships that were encountered.

Death also accompanied the 1935 Andes-Amazon Expedition and subsequently overtook its leader, E. E. Loch, who, on his return to civilisation, is reported to have shot himself, though not before he had written a graphic account of the privations and sufferings which he and other survivors endured. The expedition set out under the auspices of the Heye Foundation, New York, its main purpose being the conducting of an ethnological investigation among the Indians resident in the little-known Ecuadorian region of the Oriente, at the head of the Amazon Valley. But Loch was also imbued with the idea of exploring the adjacent Llanganati Mountains and, at the same time, of making a determined effort to locate the Valverde treasure. Thus it came about that, after spending some months in the torrid jungles which clothe the banks of the Curaray and Napo Rivers, he and his party made their way to Pillaro.

Loch's preparations for the trip into the Llanganatis afford eloquent testimony of the hazardous nature of the enterprise. Quite apart from the appalling climatic conditions—'almost perpetual rain and fog; constant earthquakes, rock falls and floods' is Bloomberg's informed description—another major problem was presented by the fact that the region is uninhabited and devoid of food resources. In consequence, on top of other supplies and equipment, all provisions need to be carried. As many porters as are necessary can, of course, be hired—but each carrier needs to be fed and, in practice, a man will consume all the food he can carry in not more than three weeks. At most, therefore, a self-contained

expedition which plans to keep on the move can expect to advance for about ten days, whereafter such eatables as remain will be required for the return journey. Add to this the prospect of unavoidable delays caused by hold-ups *en route* and by losing one's way, not to mention the reduction of precious food supplies occasioned by accidents and petty pilfering, and some idea of the difficulties inherent in the venture will be gained.

It was while making ready for the trip that Loch was approached by José Ignacio Quinteros, an old man who claimed to have spent most of his life searching for the Valverde treasure and who professed to know how to avoid all the mistakes to which newcomers were usually prone. He was accordingly taken on as guide and, on 31 March, 1936, the members of the party began their climb into the mountains, arriving in the afternoon at the spot where the Farm of Moya had once stood and beyond which they made their first camp.

By noon the next day the *pongo* (pass) of the Mountain of Guapa was reached, and here, at an altitude of more than 12,000 feet, they faced a bitterly cold wind and driving rain and later spent a freezing night in the shelter of a small copse. On the following day, considerable difficulty was experienced in crossing the morass mentioned by Valverde, but once this had been passed, the twin lakes of *Los Anteojos* were soon seen—unmistakable in their resemblance to a pair of spectacles, but so unexpectedly small that they might easily have been missed. The great black lake (*Yana Cocha* on the Guzman map) was then observed, beyond which the party duly came to and crossed over the promised ravine, on the far side of which was encountered the next landmark in the shape of a forest.

Into this they plunged. Loch describes it as dark, dank and drear, as a ghostly world of chill, depressing misery, in which every leaf and hanging strand of moss drips ceaselessly with moisture from the incessant rains. Several days were occupied in hacking a way through this sodden barrier, until at last higher and more open ground was reached and a possible Margasitas Mountain sighted. But at this moment a cloudburst somewhat heavier than usual descended upon them, with the result that their camp was flooded, part of their food supplies were washed away and Loch and his companions were forced to spend the night up a tree.

It became possible to resume the march three days later, by which time the porters had begun openly to grumble, and Quinteros, at the onset of the journey full of hope and enthusiasm, had

relapsed into a moody silence and appeared to have lost all sense of direction. The following day, Loch decided to make for a high pass behind some peaks and, after much wandering, the party reached a lake which, from its appearance, may well have been that found by Brooks. Near by, at all events, was an old camp site and close to it a long, narrow cut which led to the edge of the lake—an evident attempt to drain it—while across the water was an unusual rock formation not unlike a church porch. In view of these favourable signs, and encouraged by an inviting glint from beneath the surface of the water, preparations were made to drag the lake with the aid of a makeshift raft. But the glint, alas, came not from gold, but from mica!

With this disappointment to speed them on their way, the expedition members began a hasty retracing of their steps, for food was running low. Loch, however, was far from ready to acknowledge defeat, and from Pillaro he made his way to Quito, there to prevail upon President Frederico Páez to provide him with a party of Ecuadorian army engineers in return for an undertaking to carry out a geographic survey of the Llanganati region. By 12 June, this more ambitious expedition was on its way, with Loch as its leader and, under him, seventeen soldiers in charge of an officer, together with a sufficiency of porters. There were also a number of pack animals, but beyond the point where the Guide directed that horses should be left behind, the reason for this injunction soon became apparent. The luckless creatures either got themselves bogged down in the endless swamps or fell to their deaths over the edges of precipices and, after several such incidents, those which survived were sent back.

In the days which followed, as no gold but merely ever-increasing hardship was encountered, the carriers decided to seek an easier way of earning a living. It was by this time evident, too, that many of the soldiers were unfit to continue; and it was finally arranged that the main party should make its way back to Pillaro, while Loch and three companions (a peon and two soldiers) should continue the search for a route to the Napo River. This destination and a lone outpost of civilisation three of them reached ten weeks later, after a nightmare journey during which one of the soldiers lost his life trying to cross by raft a swiftly flowing waterway which more than a dozen attempts to bridge had failed.

It was after a meeting with Loch and listening to an account of his adventures that Rolf Blomberg, a Swedish writer and explorer

now resident in Quito, began to plan a trip into the Llanganati Mountains himself, though, in the light of his subsequent experiences there, he concedes that perhaps the tale of Loch's own sufferings should have deterred him.

It chanced that in 1949, George Howden, a former Wing Commander in the R.A.F. and a friend of Blomberg, was flying for the Shell Company of Ecuador, then drilling for oil in the Oriente. To reach this most easterly of the Ecuadorian provinces, Howden, when the weather permitted, used to fly over the Llanganati area, keeping a sharp look-out for anything resembling the three peaks described by Valverde. And, in the belief that he had discovered what he was searching for, he afterwards arranged to accompany Blomberg into the mountains on foot. In the meantime, the Shell Company no longer having need of him, Howden joined the Ecuadorian aircraft firm of AREA, for which concern he was working when, at the last moment, a period of leave due to him was cancelled when several of his fellow pilots fell ill. But though he was thus prevented from accompanying Blomberg as planned, use was still made of his services. Anxious to take a look at the terrain from the air, Blomberg sought out Luis Arias, head of AREA and asked for the loan of Howden and a plane for a two-hour trip over the Llanganatis. In return and in lieu of a cash payment, which at the time he could ill afford, he offered a fee of 2,000,000 American dollars in the event of his recovering the treasure—to which somewhat startling proposition Arias sportingly agreed!

From the plane, Howden pointed out *Los Anteojos* and *Yana Cocha* and then set course for what he considered to be the three peaks referred to by Valverde. With some misgivings, Blomberg noted that several groups of triple peaks were to be observed in the vicinity. . . . To offset this complication, however, he had acquired a new partner for the trip, who promised to be a most useful companion—Luis Andrade, who had already made many journeys into the mountains in search of the treasure and who was familiar with much of the route described in the Guide.

Before starting out, the two signed a formal agreement in Quito on 5 November, 1950. This stipulated that Andrade was to act as guide, Blomberg was to pay all expenses, and the treasure was to be shared equally between them. Andrade then led the way, and the first of the familiar landmarks was encountered and passed without incident, though, to the discomforts to be endured in the dripping wetness of the sub-tropical forest, Blomberg adds the presence of tall *espanada* grass with bayonet-like leaves,

impenetrable bamboo thickets, large biting gadflies and swarms of blood-sucking insects called *arenillas*.

From time to time they caught a glimpse of three peaks forming a triangle, and by 17 November they had gained the foot of what they supposed might be the Llanganati Mountains. At this point, to conserve supplies, six of the eight peons in the party were sent back to Pillaro. But several days later, with their stores running low, they had the mortification of watching helplessly while George Howden, his plane loaded with food for them, vainly searched for their smoke signals, which were too far away for them to attract his attention. An immediate return to base necessarily followed.

Within a year, Blomberg and Andrade were back again in the mountains, this time furnished with better equipment, more porters and a larger supply of provisions. But two weeks after reaching their previous camp, they were again forced to return, and September of the following year was fixed for a third attempt. When the time arrived, however, Blomberg was unable to accompany his partner, who made the trip without him, after which a fourth and joint expedition was undertaken in February, 1955. This was defeated by the weather, which was so bad that it led to an eventual refusal on the part of the porters to continue the journey. A fifth jaunt was likewise unproductive, since when Luis Andrade has made several more lone excursions into the mountains and at the time of this writing he is once again engaged in hacking his way through the intervening jungle on the thirty-second of his pilgrimages into the Llanganatis.\*

#### IV

Given that at the time of its despoliation the Empire of the Incas was overflowing with gold and silver, and that considerable quantities of this wealth, including portions of the Atahualpa ransom, escaped the clutches of the Spanish invaders, what is to be made of this story of the so-called Valverde treasure, which has lured the members of one expedition after another into the inhospitalities of the Llanganati Mountains in a vain search for it?

\* Regarding their last joint attempt, Blomberg reported (private communication, 15 September, 1959):

*We haven't found the Valverde treasure so far, but we are still optimistic!*  
Later, again writing from Quito (12 October, 1959), he announced:

*My friend Luis Andrade left yesterday for the Llanganatis. I shall let you know if he comes back loaded with gold!*

And finally (25 November, 1959):

*Starting a new expedition to Llanganati in January.*

We may at all events accept without reservation Richard Spruce's account of how he happened upon the details and share his opinion as to the genuineness of the Royal Warrant which enclosed a copy of the Guide and commanded that a search for the gold be made. It would, however, be both interesting and convincing to be able to obtain confirmation of the reported finding by Thour de Koos of the original of Valverde's *Derrotero*. Expert examination of this document, even if it did not enable a definite conclusion to be reached as to its authenticity, might at least help to settle the vexed question of its date.

There appears to be considerable uncertainty as to this. Spruce, in mentioning the theft of papers from the Tacunga archives which took place some years before his visit, adds that the copy to which he had access was dated 14 August, 1827. The missing documents were clearly older than this, if only because of Guzman's known interest in them. This Spanish (Loch is alone in referring to him as a German) botanist is said to have met the famous Alexander Humboldt, whose explorations of the Quitoian Andes were undertaken at the start of the 19th century and, according to the information obtained by Spruce, Guzman's death occurred not long after this—in 1806 or 1808. Blomberg is more specific on this point: he gives 1806.

Valverde's *Derrotero*, then, was lodged in the Tacunga archives not later than the start of the 19th century and not earlier than the founding of this capital of the Province of Cotopaxi in 1534—an interval of more than 250 years. Blomberg, it is true, refers to attempts which were made to locate the treasure during the 18th century, but only to say that little is known about them.

Unfortunately, the name of the Spanish ruler to whom the *Derrotero* was bequeathed is not known, and we are hardly less uninformed about Valverde himself. The well-known Ecuadorian geographer Luciano Andrade Marin,<sup>53</sup> who has carefully sifted the available evidence and who is himself no stranger to the Llanaganatis, has given it as his considered opinion that 'the existence of a Valverde, author of the *Derrotero*, can no longer be doubted, whether his name was Pedro, Juan or Diego'. His inclination is to ascribe the treasure document to the early 17th century, and this view is accepted by Blomberg, who refers to Valverde as 'a poor Spanish soldier who lived in the town of Facunga towards the close of the 16th century'. For the rest, Verrill describes him as a common soldier who took part in the Conquest, while Wilkins states that he returned to Spain (and for good measure gives his port of

disembarkation as Seville!) during the reign of King Philip II, prior to that monarch's despatch against England of his much vaunted Invincible Armada. But if we dismiss all this as the mere assumption which it would appear to be, we are left with nothing more than the reference contained in the Title added to the *Derrotero* by the unknown copyist of 1827:

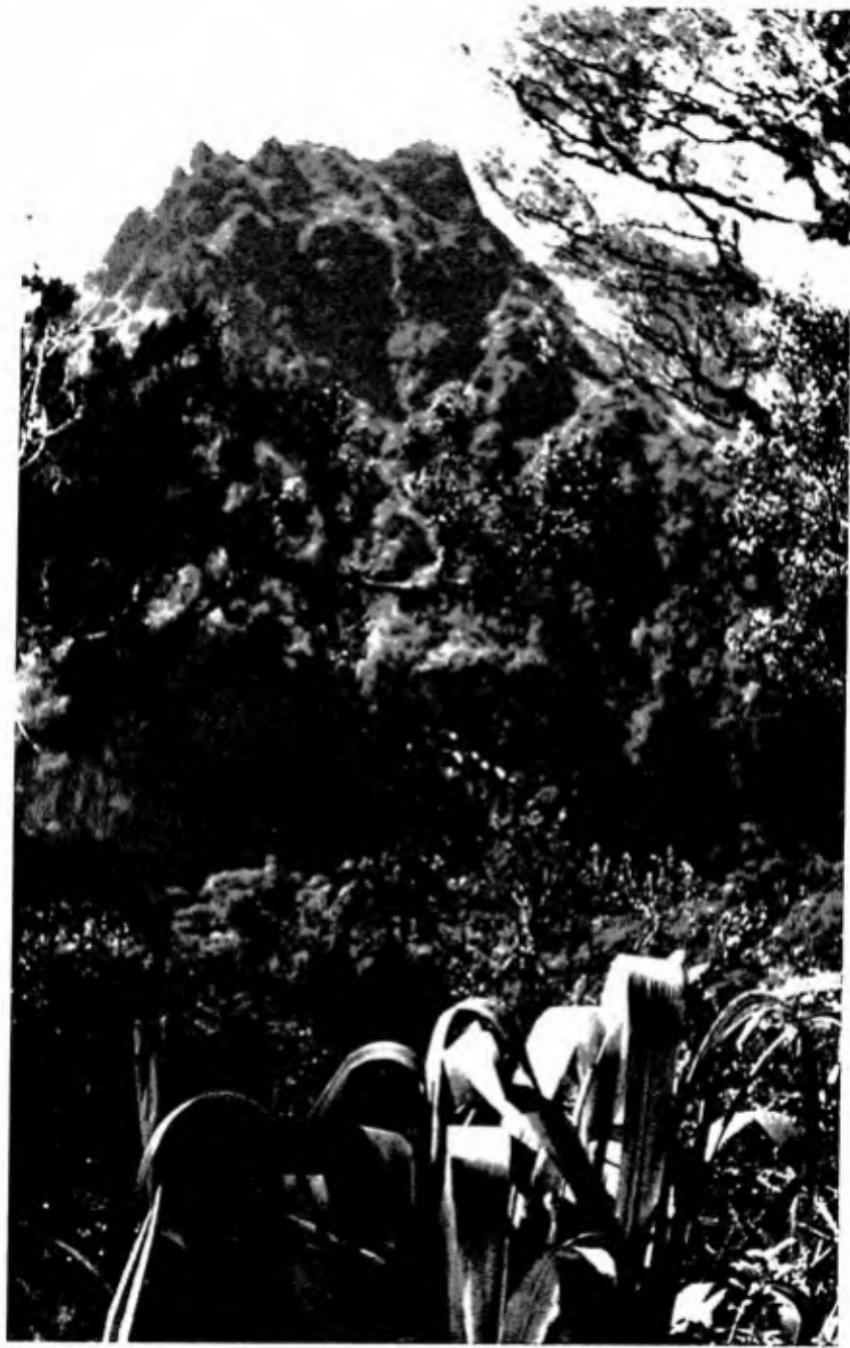
*Guide or route which Valverde left in Spain, where Death overtook him, having gone from the Mountains of Llanganati, which he entered many times, and carried off a great quantity of gold. . . .*

As for the landmarks mentioned in the Guide itself, the reference to the Farm of Moya might be of help in deciding the question of date, if it could be determined when this homestead was established. Pertinent, too, would be an explanation of the reason for the construction, in an inhospitable region such as the Llanganatis, of a lake made by hand. Again, why should this man-made pool provide a better hiding-place than one of its many natural counterparts, in which the region abounds? On the other hand, if the Guide is a fabrication, why should its author risk arousing suspicion by an unnecessary reference to an *artificial* lake?

The landmark referred to as the Way of the Inca also invites comment. Presumably it formed a part of the famed Incan road system, more than 10,000 miles in length, which extended to all parts of the Empire, and the main arteries of which have recently been traced by members of the expedition led by Victor W. von Hagen<sup>61, 62</sup> in 1952-54.\* But in this event, at what point does it branch off from the main Quito-Cuzco highway and where, moreover, does it lead? Again, if a large consignment of gold and silver was being conveyed along this byway when the news of the death of the Inca was received, what was it doing so far from its destination at so late a date?

Faced with this last question, Verrill was moved to suggest that the treasure was not a part of the Atahualpa ransom at all, but merely a valuable consignment of artistic objects which happened to be in transit from some now vanished jungle city to the pro-

\* The remains of two main highways were found, running roughly parallel to one another—the Royal Andean road, 15-18 feet wide and 3,250 miles long, extending from the Ascasayo River (beyond Quito) through Ecuador, Peru (via Cuzco) and Bolivia to Argentina; and a coastal road, 24 feet wide and 2,520 miles long, running from Tumbes in the north to as far south as Chile.



Among the Llanganati Mountains: a view of the eastern slopes of this wild and uninhabited region of the Quitonian Andes

MAP OF THE  
WEST-INDIES &  
MEXICO or "NEW" SPAIN.

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The 'Tracts of the Gallions' as depicted in Herman Moll's *Atlas Minor* (London 1732)

vincial capital of Quito. But such speculation hardly inspires confidence in Valverde's *Derrotero*, for, if the Guide is to be regarded as unreliable in one detail, it may well be held to be suspect in others, if not in its entirety.

One good reason for supposing that the treasure *was* intended as a contribution to the ransom arises from the fact that Quito was the birthplace of Atahualpa and that his supporters in this region would be much more anxious to bring about his release than would his erstwhile opponents in Cuzco, where the defeated Huascar was still regarded by many as the rightful Inca. As for the time element, this would necessarily be governed by the fact that, whereas relays of couriers, stationed as they were about a mile apart along the entire length of the highway, could convey messages over distances of up to 250 miles a day, laden llama trains averaged only about 12 miles in the same period. This limitation, however, would apply about equally to Quito and Cuzco, for Caxamalca was situated on the main Andean highway almost equi-distant between the two towns, which lay some 1,250 miles apart. Hence the question of remoteness cannot explain why gold should reach the Spaniards from Cuzco, but not from Quito. One possible answer could be that the Quito consignment was nearing its destination when news of the death of Atahualpa was received, whereupon the bearers at once turned back. It is conceivable, too, that some deliveries of gold had already been made from Quito and that the contents of the Valverde hoard were intended to be an additional contribution.

One fact, at all events, seems to be clear: the Guide to the treasure has so far failed in its ostensible purpose. Whether by accident or design, beyond the point where the *Corregidor* of Tacunga and his party turned back, the clues, thus far unmistakable and easy to follow, become increasingly vague and ambiguous. Thus, at Margasitas, Valverde directs that those who would follow in his footsteps should leave this landmark on their left hand, and he gives the added warning that the mountain must be gone round in the particular manner indicated by the hieroglyph. Seemingly, however, the Guide allows for a possible misinterpretation of these instructions by adding that, if the way is missed at this point, on reaching a river, its right bank should be followed until further progress is barred by a canyon, whereupon the adjacent hillside should be climbed and the Way to the Inca thus reached by this more arduous route. But although this alternative has been attempted, it has always failed to lead to the

Incan highway and to the *socabon* in the vicinity of a cascade which falls into a quaking bog.

In an editorial comment, A. R. Wallace makes a detailed analysis of the Spruce translation of the Guide and expresses the belief that the directions given may yet lead some careful follower of them to the treasure. His reasoning is as follows: Bearing in mind that the declared location of the lake made by hand, wherein the gold is stated to be concealed, lies somewhere on the slopes of the Ilanganati Mountains, the only conceivable explanation of the hieroglyph is that it is an indication that the traveller must here turn back and, bearing left all the while, make a winding ascent of the mountain until he reaches a point on the far, that is, the south, side of it. In the course of this journey, after emerging from the forest, he should then encounter the promised pasture and, by crossing it as directed, reach the Way of the Inca—running through a canyon which cannot be other than the upper section of the *Cushpi pongo* shown on Guzman's map and which in turn serves to identify the ancient highway as the so-called *Encanado de Sacha pamba*. At this point the explorer will be in the area bounded by the three supposed volcanoes—and within measurable reach of his goal. With Margasitas in the rear, Zunchu-urca on the right and Topo ahead, it should be possible to locate the *socabon* (a name which refers to any tunnel, natural or artificial) and so reach the third of the mountains, which, by a simple process of elimination, cannot be other than the great Topo.

This reasoning, Wallace adds, is supported by the stipulated number of days—five—required to make the trip, which suggests, as three-fifths of the journey have to be made on foot, that the total mileage cannot exceed 100 and that the distance from the Margasitas Mountain to the treasure lake must be less than twenty miles.

All this sounds perfectly logical, but in practice the indeterminate nature of some of Valverde's landmarks, not to mention the vagaries of Guzman's map (which is not strictly to scale and, moreover, attempts to combine a vertical with a horizontal projection), have led to endless confusion. Loch complains that some of the directions could be applied to a dozen different places. The 'dry quebrada', for example, is located in a region which appears to consist of nothing but quebradas, the only difference being that none of them is dry, though this, of course, may be a seasonal shortcoming. Similarly, lakes and cascades abound, while the all-important Mountain of Margasitas has proved to be most elusive.

It is true that Guzman shows it on his map. But did he really identify it? Or is the answer to this question to be found in the fact that he, too, failed to find the treasure? Blomberg, the latest recruit to the ever-hopeful army of searchers, freely acknowledges, but remains undeterred by, these uncertainties. And so the quest continues. . . .

## CHAPTER THREE

### WEALTH UNDER WATER

*Proposition: That in the year 1642 an entire fleet of treasure laden galleons foundered in the Caribbean and that the remains of some of these vessels await discovery in the vicinity of the Silver Shoals, to the north of Hispaniola.*

#### I

WITHOUT DOUBT, a vast accumulation of riches is to be found at the bottom of the sea. But quite apart from the inaccessibility of the greater part of the ocean depths, it has to be remembered that nearly three-quarters of the earth's surface lie beneath the waves—some 140,000,000 square miles in all! The area of search, however, can be very considerably reduced by restricting it to busy sea lanes (E. R. Snow<sup>123</sup> has listed more than 1,000 shipwrecks in the neighbourhood of Southern New England alone), of particular interest to the treasure seeker being the Caribbean, across which, from the beginning of the 16th century onwards, a stupendous tonnage of gold and silver was conveyed, *en route* from the New World to the Old. And though, despite many hazards, much of this valuable traffic reached its destination safely, there is reliable evidence to show that not a few of the heavily laden vessels foundered and sank at the onset of their homeward voyage, some of them in relatively shallow waters.

The Caribbean Sea, 1,500 miles long and with a width which varies from 400 to 700 miles, has a total area of about 750,000 square miles. Essentially, it is that part of the Atlantic Ocean which, bounded by the shores of Venezuela to the south and by the coastline of Mexico to the west, is enclosed by the West Indian archipelago to the east and north. Of the numerous islands of the West Indies, so-called by their discoverer in the belief that they formed the eastern limits of Asia, the two largest are Hispaniola (now shared by the Republics of Haiti and Santo Domingo) and Cuba. Both were visited by Columbus on the occasion of his first voyage of discovery in 1492 and a post, Navidad, was established on the first-named. Columbus called this island *La Espanola* (soon corrupted into Hispaniola) and the whole of the region was claimed for Spain.

A second voyage, begun in the following year, was undertaken in the company of a force of 1,500 men, the intention being to establish ownership of the new territory. To this end, Cuba and other of the islands were explored and the town of Isabella was founded on Hispaniola, where a brother of Columbus was left in charge, though the settlement was later transferred to the mouth of the Ozama River, on the southern coast of the island and given the name of Santo Domingo de Guzmán (modern Ciudad Trujillo). But it was not until his third voyage, made in 1498, that Columbus crossed the Caribbean and so reached the South American mainland. He landed near the mouth of the Orinoco, a region which, from the delta of that river to the Isthmus which links the two Americas, was called *Tierra Ferme* and subsequently came to be known as the Spanish Main (a term sometimes incorrectly applied to the Caribbean Sea).

Not long after the inauguration of Santo Domingo, the first alien seat of government in the New World, Alonso de Ojeda established a colony on the mainland to the east of what is now Panama, and Diego de Nicuesa founded Nombre de Dios on the Isthmus itself, the two groups afterwards uniting. Vasco Nunez de Balboa, who is said to have journeyed from Santo Domingo by stowing away in a wine barrel, became the leader of the mainland settlement, from where, in 1513, he made his way across the 50-mile-wide Isthmus and so beheld the immensity of the Pacific Ocean, which he duly claimed in the name of the King of Spain. Thereafter, he performed the incredible feat of conveying two ships in sections across the mountainous Isthmus and so succeeded in launching the vessels on the newly discovered Southern Sea.

Pedro Arias de Avila (Pedriarias) was made royal governor of the region and, when he left Europe to take up the appointment, he brought another 1,500 colonists with him. Expeditions were promptly despatched to surrounding areas, the town of Panama was founded on the Pacific coast, and from it a land route established to the Atlantic. The process of conquest and colonisation then went steadily ahead, thanks to the ruthless activities of the *conquistadores*—Hernando Cortes in Mexico, Pedro de Alvarado in Guatemala, Francisco Pizarro in Peru, Jiminez de Quesada in New Granada and Francisco de Montejo in Yucatan—with the result that, by the end of the 16th century, the whole of the territory from New Mexico and Florida in the north to Chile and the Rio de la Plata in the south owed allegiance to the Crown of Castile. By right of discovery and conquest, Spain thus laid claim to the

Americas with the exception of the Brazils, conceded to the Portuguese by the Treaty of Tordesillas, a division of the spoils which had earlier been sanctified by Pope Alexander VI (the notorious Rodrigo Borgia, no less) in a series of bulls, beginning with *Inter caetera* and *Inter caetera II* (April and June, 1493).

Once there was a slackening of the flow of riches which the plunderers were able to wrest from the temples and tombs of their hapless victims, attention turned to the sources of native wealth. It was learned by the invaders that much of the gold of the Incas had come from the Land of the Carabaya, to the east of Lake Titacaca, and gangs of Indians were soon set to obtaining supplies of the precious metal for their European taskmasters, under an onerous system of forced labour known as the *mita*. With what result may be judged from the fact that, whereas in the year 1500 the total amount of gold in Europe has been estimated to have been less than 200 tons, by the end of the century the figure had risen to more than 600 tons, virtually the whole of which unprecedented increase had come from the Americas.

Equally prodigious was the supply of silver which was obtained—an estimated £1,500,000,000 worth of this metal, shipped in the guise of pigs and sows,\* was taken from Peru alone! Much of this stupendous output came from a single source, the famous *Cerro Rico de Potosi*, described by José de Acosta<sup>1</sup> as: 'The greatest treasure that ever was in this world.'

Stories of the existence of Mountains of Silver were first told to the Spaniards by Indians encountered in the forests of Paraguay, who indicated that an abundance of the metal was to be found among the peaks of a lofty plateau located in present-day Bolivia, then the province of Charcas (Alto Peru). Some Inca mines in the vicinity, including the rich hill of Porco, were early worked by Hernando Pizarro, who, in company with his brother Gonzalo, had been given extensive land grants in the region. The subsequent, and accidental, finding of Potosi has been variously recounted, one version telling how an Indian herder, on pulling a bush out of the ground, observed shining globules of metallic silver clinging to its roots. This was in 1545 and, in the space of half a century, the town of Potosi, the founding of which quickly followed the discovery, became the largest settlement in the New World, with a population of 150,000, among which

\* Oblong masses, formed by allowing the molten metal to run into moulds, from the main channel of which (the sow) there branched a series of secondary channels (the pigs).

were to be numbered 4,000 Spanish mine- and mill-owners and merchants.

Mount Potosi, with a circumference of 18 miles, contained seemingly inexhaustible supplies of silver, crystallised in characteristic cubic and octahedral forms and, up to the year 1800, the official records show that the value of the royal fifth from this one source alone amounted to £32,600,000, thus giving a certified minimum output of £163,000,000. Subsequently, and before the wondrous lodes became played out at last, twice as much metal again was extracted; and to-day the legendary hill stands riddled with more than 5,000 abandoned tunnels and shafts, whose gaping mouths afford mute testimony of the ceaseless activity which its valuable contents once engendered.

From the mines in the Andes and elsewhere, endless trains of heavily laden mules and llamas wended their way down the mountain trails to the shores of the Pacific, there to make contact with coastal vessels which conveyed the bullion to Lima and thence to Panama. Thus far on its journey, at any rate in the early years, the treasure was safe enough and the aforementioned de Acosta, who went out to Peru as a missionary in 1571, marvelled at the sight of groups of a thousand or more pack animals, each carrying bars of silver, *en route* from Potosi to the port of Arica, without any guard or escort in attendance other than a few native drovers.

Thus it happened that when, in 1579, Sir Francis Drake had the temerity to enter the coastal waters of the Pacific, he was greatly assisted by the false sense of security which everywhere prevailed. At a place called Tarapaca, on the Pisagua River, where a landing had been made in order to obtain supplies of fresh water, a Spaniard was found asleep with thirteen bars of Potosi silver by his side, which inviting load was quietly removed without waking him! Farther on, the intruders encountered a small llama train, also carrying silver, and prevailed upon its solitary escort to divert his charges in the direction of their ship. Again, at Arica, where Drake boldly sailed into the harbour, two vessels were found, one of them with a cargo of silver, watched over by a lone Negro. And when, on reaching Callao, the port of Lima, it was learned that the *Nuestra Senora de la Concepcion*, more familiarly known as the *Cacafuego*, had sailed a fortnight earlier, loaded with treasure, the British ship at once set off in pursuit—later capturing its prey, though not without a fight, and securing a considerable amount of loot, which included thirteen chests of pieces of eight, eighty pounds of gold and twenty-six tons of silver.

At Panama, meanwhile, it was customary for the precious cargoes to be landed and transferred to mules and then taken across the Isthmus by way of the famous *Camino Real* (Royal Road) through the jungle, to the Atlantic port of Nombre de Dios, where they were loaded on to galleons for shipment to Spain. And it was at this stage of the proceedings that one of the dangers inherent in the enterprise quickly became apparent: the risk of attack by freebooters and pirates.

The realisation that vast new lands existed in the west and that Spain intended to maintain not only a territorial but also a commercial monopoly over them inevitably gave rise to a great deal of resentment among other maritime powers. And when a seemingly endless stream of gold, silver and pearls began to flow from the Americas to Spain, to that resentment were added feelings of envy and thoughts of grand larceny. The result was an outbreak of what amounted to open piracy, unofficially encouraged, if not actively sponsored by the excluded governments.

Attacks on the Spanish plate ships were initiated by the French, who were soon joined in this profitable activity by the English and the Dutch and, eventually, by the buccaneers, an independent brotherhood composed of many nationalities, who boldly established their headquarters in the very midst of their intended victims. Before long, the Caribbean was swarming with these gentlemen of fortune, of whose one-time presence there we are now reminded by the island of Dead Man's Chest, a name which gives, it may well be, added meaning to R. L. Stevenson's familiar lines:

*Fifteen men on the dead man's chest—  
Yo-ho-ho, and a bottle of rum!*

Spanish reaction to this unwelcome turn of events was the establishment of great fleets of merchantmen, which sailed only at long intervals under the protection of warships and eventually, by a *cedula* of July, 1561, the worth of the system having amply shown itself, sailing in convoy was made obligatory. Thereafter, no more than two fleets were organised each year, and the ports of entry into the New World were restricted (with the later addition of Acapulco on the Pacific side) to Vera Cruz in Mexico, Cartagena in Columbia and Nombre de Dios (subsequently abandoned in favour of Porto Bello) on the Isthmus.

Thus cheated of their prey at sea, Spain's adversaries turned their attention to Spanish coastal towns and ports; and in 1586 Drake sacked Santo Domingo and Cartagena and afterwards

assisted in the defeat of the supposedly Invincible Armada (132 ships, 3,165 cannon) which the outraged Philip II of Spain despatched against England two years later. This humiliating defeat was soon followed by British encroachments in the Caribbean. In 1605 the crew of a vessel from England happened upon, and claimed possession of, Barbados and, twenty years later, colonists went out to the island. In the meantime, St. Kitts, one of the Leeward Isles, had seen the arrival of British settlers in 1623 and Antigua, another of the same group, was similarly occupied in 1632. New Providence, among the Bahamas, came next, whereafter, at the instigation of Oliver Cromwell, British forces, though they failed to occupy Hispaniola, succeeded in capturing and retaining the strategically placed island of Jamaica. The result of this blatant act of aggression was another outbreak of war between Great Britain and Spain (1656-59) and, in the uneasy truce which followed a tacit acceptance of the annexation, relations between the two countries were again severely strained by the friendly reception accorded the buccaneers by the Jamaican authorities.

In the face of continuous attacks on their towns and ports in the New World, the Spaniards set about improving their defences; and Cartagena ultimately achieved near-impregnability, thanks to a series of strong points which were linked by a maze of underground passages. The harbour, moreover, was located some distance inland, and ships could reach it only by way of two narrow channels (Boca Grande and Boca Chica) which wound their way through the jungle to the secluded bay beyond. After several raids, the larger of the two approaches was filled with blockships, while a pair of forts, with a massive iron chain stretched between them, protected Boca Chica. Nor was this all, for the bay itself was dominated by the fortresses of San Fernando and San José, whose towering walls were lined with hundreds of cannon. Vast sums were expended on the building of these formidable defences,\* but that the money had been well spent was demonstrated in 1740 when, yet another state of war existing between England and Spain over the matter of Jenkins' ear, Admiral Edward Vernon attacked Cartagena in an attempt to emulate the feat of Drake. But the greatly strengthened

\* Even as early as the time of Philip II, so the story goes, a courtier found the King gazing earnestly out across the Atlantic one day and, on his enquiring what it was that the royal eye hoped to see, the monarch replied that he was at a loss to understand why he was unable to discern the walls of Cartagena, so great was the amount of money that had been spent on them! But at one time or another, this rueful tale was told of nearly every fortified port in the New World, not excepting the new Panama, built to replace the old city which Henry Morgan and his cut-throats burned to the ground in 1671.

citadel held out and successfully withstood fifty-six days of siege.

There remained, however, one other hazard against which even the might of Spain was unable to protect her treasure ships: inclement weather. In the Caribbean, as was soon discovered, highly destructive tempests were liable suddenly to occur, particularly during the rainy season (July–October). Akin to the revolving wind storms known as cyclones (Bay of Bengal) and typhoons (China Seas), these *huracans* (hurricanes), as the Indians called them, originated in the Atlantic and tore across the islands of the West Indies at speeds of up to 150 miles an hour. On land, they caused widespread devastation (600 lives were lost in the French island of Guadalupe alone in the great storm of 1928), while at sea the probable fate of sailing vessels which chanced to lie in their path can well be imagined.

## II

About the middle of the 17th century the taverns of the world's seafronts were alive with rumours about an entire fleet of Spanish treasure ships which, it was said, had foundered in a hurricane on the outskirts of the Caribbean, taking a dozen fortunes in gold and silver to the bottom with them. Inevitably, the accounts varied somewhat as to detail. According to one tale, sixteen vessels had been lost. In the words of another, the convoy had consisted of fifteen plate ships and two frigates, one of which had limped back to port to give news of the disaster. Yet a third version suggested that out of a total of sixteen vessels, it was the *Santissima Trinidad* which had alone survived. There was general agreement, however, that, prior to sailing, the ill-fated ships had assembled in the harbour of Puerto Plata, Hispaniola, and had reached the vicinity of the eastern Bahamas when the hurricane struck. It was also widely held that, in attempting to ride the storm, the vessels had been driven on to one or other of the extensive coral reefs which lurk off the north-eastern coast of Hispaniola and that their shattered remains thus lay in relatively shallow water.

We may be sure that the Spanish authorities themselves attempted to locate the missing treasure, the loss of which was in due course confirmed. And without doubt, many an unofficial search for it was made by the inhabitants of neighbouring islands. But the years went by without there being any word of its having been found, and the story of the missing millions continued to be told and re-told until eventually it reached the ears of King Charles II of England. That indigent monarch, then, had he but known it,

approaching the end of his troubled reign, was sufficiently interested in the account to commission two naval vessels to make a search, an undertaking which was assisted, ironically enough, by Cromwell's earlier seizure of Jamaica.

Captain George Churchill, of the frigate *Faulcon*, was placed in charge of the venture and, under him, Captain Edward Stanley, of the *Bonetta*, a 61-foot sloop with a draught of only 4½ feet. Their guide was a Captain Harman, about whom little is known, apart from the fact that he was a Dutchman and that he claimed to possess information about the whereabouts of one of the wrecks.

The two vessels, accompanied by a flotilla of merchantmen also destined for the Caribbean, left Portsmouth Harbour in mid-April, 1683, and reached Barbados, the most windward of the West Indian Islands, two months later. Here, the treasure hunters lingered for a week, planning their next move. According to the information at their disposal, the remains of the sunken ships ought to lie somewhere between the Turks Islands and Cape Cabron on Hispaniola, an area which abounded in dangerous reefs, including the Mouchoir Bank (also called the Handkerchief Shoal), the Ambrosia Bank (*alias* the North Riff) and an oval protuberance known as the South Riff.\*

Off Cape Cabron, Churchill ordered Stanley to sail ahead and to signal by firing a gun if he sighted any cays which might betoken the possibility of a wreck. No cays were found, however, whereupon Harman, as guide to the expedition, was called upon to show the way to a safe anchorage. Puerto Plata seemed the obvious choice, but it then transpired that he who was to pilot them to the treasure was uncertain of the precise whereabouts of the harbour and, after several days of vain searching, it remained for a French ship to direct them to it!

After taking bearings, a course was set for the Mouchoir Bank, located to the south-east of the Turks Islands and, as soon as breakers were seen, the search began. Nothing was found, and, in the end, Harman insisted that it would be necessary to return to Puerto Plata and start afresh by steering due north. In accordance with his wishes, this was done. But once again, and despite the most diligent searching, the expected outlines of the submerged galleon, or galleons, did not appear. At this, Harman announced it as his firm conviction that wreckage would be found at a spot some four miles to the west of the reef, but by this time, at any rate

\* The North and South Riffs have since joined, and to-day collectively form what is known as the Silver Bank.

for the present, Churchill had lost interest in the enterprise. Many of his men were incapacitated by a severe 'Griping of the Gutts', in view of which he ordered the ships to Jamaica.

It had been intended from the onset that the *Faulcon* and the *Bonetta* should serve a dual purpose in the Caribbean, in that the two ships should also be at the disposal of the Governor of the British possession, to which they now repaired. And, as it happened, Stanley was soon required by Sir Thomas Lynch to undertake a mission to Cuba. Immediately on his return, however, he once more set sail for the Mouchoir Bank, with Churchill again in command and the Dutchman acting as guide. The last-named, as uncertain and indecisive as before, now professed to be looking for a marker in the shape of a solitary rock, rising steeply out of the water. But it had still not been found when gales made it necessary to seek the protection of Puerto Plata harbour and as, after a week of waiting, the high winds showed no sign of abating, the ships made their way back to Jamaica.

At Port Royal another mission for Governor Lynch awaited the attention of Stanley and, by the time it had been accomplished and he was once more available to continue the treasure hunt, Churchill had been recalled to England. His place was taken by Captain Tennett, of the *Guernsey*, who had been given certain directions for locating one of the wrecks by an aged Spaniard. Significantly, it seemed, and particularly so to Harman, these instructions also referred to a single rock which rose out of the sea 'Like a boate keele up'. Despite weeks of patient cruising, however, no such rock was found and when, much discouraged, the searchers returned to Port Royal, it was to learn that Lynch had been succeeded as Governor by Hender Molesworth.

In company with the *Ruby*, the new Governor set Stanley to chasing a troublesome pirate by the name of Bannister, whose vessel, the *Golden Fleece*, played hide and seek with the pursuers among the shoals and islets, and finally eluded them completely. It was during this chase that Stanley, on hailing a passing vessel, was informed that she was from New York, 'goeing to Look for a Wrack on ye Bohemia Shoolds'—a reference to the Bahama Banks, two areas of shoals located to the west of his own area of search. Many other such private ventures were to follow, not a few of them made by colonists from the Dominion of New England, and the records show that, during the years 1687–89, as a means of safeguarding the King's interest, Governor Sir Edmund Andros issued licences to Masters of boats from Boston and Salem, as well as from New York,

whereby they gave bond for £5,000 to return within one year to the port of departure, there to pay the royal dues on any treasure that had been recovered.

At Jamaica, meanwhile, another errand to Cuba awaited Stanley's attention and, on his subsequent return, Governor Molesworth had interesting news for him about the treasure: a sailor by the name of Thomas Smith had come forward and testified on oath, not merely that he knew where some of it lay, but that he had actually seen it! It appeared that while a ship in which he was serving had been cruising off Cape Cabron, a reef had been sighted, part of which rose fully 50 feet out of the water. And while gazing down into the sea in this vicinity, he and his companions had clearly seen a tangled heap of sows and pigs of silver, not to mention a bar of gold, while not far away rested the hull of a ship, firmly wedged between two submerged rocks. Incredibly enough, a fierce argument had then developed between the Master and the owners of Smith's vessel as to the best means of securing the prize, in the midst of which disputation a gale had sprung up which carried them far to leeward. Smith added that, although it had been planned to return to the spot as soon as weather conditions allowed, so far as he was aware this intention had not yet been carried out. And he, in the meantime, was prepared to guide the *Bonetta* to the place in question—a ledge of rock to the east of the Mouchoir Bank.

Smith had signed an agreement with Molesworth which stipulated that, if he made good his promise, he would receive one-fifth of the value of anything that was recovered and that, if he failed, he would serve in a man-of-war for a period of seven years without pay. But Stanley, though no doubt much gratified to have this unexpected confirmation of the existence of the sunken wealth for which he was searching, was far from persuaded about the need to make use of the proffered services. He was convinced that the reef in question could be located without any outside help and, ignoring Molesworth's wishes in the matter, he left Smith behind when he sailed.

This time the search was conducted among reefs in an area some eighteen leagues to the east of the Mouchoir Bank. And, although no wreck was found, Stanley nevertheless returned to Molesworth in high spirits, convinced that he was on the right track at last. The Governor, not averse to sharing these feelings of optimism, urged an immediate continuation of the search, for at that very moment two other expeditions were on the point of

leaving Port Royal, one of them reportedly accompanied by a Spaniard who had survived the disaster to the treasure fleet! In the event, both these ships were forced back by storms and, taking advantage of a spell of more settled weather which followed, the *Bonetta* returned to the new area of search, on this occasion accompanied by a sloop owned by Molesworth—which vessel eventually ran on the rocks. After all but wrecking his own ship in the subsequent rescue attempts, in the course of which he broke all his anchors, Stanley returned to Jamaica, much shaken by his nerve-racking experience.

All this time, apparently, the unfortunate Thomas Smith had been kept under restraint by Molesworth, lest he should attempt to tell his story to others, though the effectiveness of this somewhat high-handed action may be questioned, in view of the fact that an entire ship's company shared the prisoner's knowledge. The Governor, however, presumably knew what he was about and, inasmuch as nothing would induce Smith to change his story, even when he was informed of the failure of Stanley's search to the east of the Mouchoir Bank, it would seem that perhaps a great opportunity had been missed. At all events, under the terms of the remarkable agreement which he had entered into with Molesworth, Smith, if he had not been telling the truth, had nothing whatever to gain (since if he did not produce the treasure he would receive no share of it) and everything to lose—his liberty for the next seven years. What man in his right mind, it may well be asked, would consent to such a one-sided bargain if he entertained the slightest doubt about his ability to fulfil his part of it? But if Stanley belatedly thought to accept the offered help and pay the agreed price for it, his change of mind came too late. It was now 1686, in April of which year the *Faulcon* sailed into Port Royal with orders for the immediate return of the *Bonetta* to England.

Not all the hopes of King Charles II, however, had rested on Stanley and Churchill. Unknown to those unlucky treasure seekers, within six months of their having set out on their quest, the King had despatched another emissary to the Caribbean on a similar errand. His name was William Phips.

### III

This Phips, later to achieve renown as Sir William Phips, Governor of Massachusetts, was a New Englander of humble birth, the son of an ex-Bristol gunsmith and one of twenty-six children. In his teens he had become apprenticed to a shipwright, and so

came into contact with seafarers from the Caribbean, who regaled him with yarns of pirates and sunken treasure. Thus imbued with a desire to travel and seek adventure, young Phips went to Boston, where, by dint of hard work and a fortunate marriage, he eventually found himself the Master of a small sloop. And in 1681, mindful of the many tales of the abundance of underwater wealth which awaited recovery in the West Indies, he sailed for New Providence Island in the Bahamas, there to seek a Spanish wreck about which he had heard while on one of his trading voyages. By all accounts the venture was a limited success. It at any rate provided Phips with sufficient funds to enable him to journey to England, where he hoped to raise interest in a more ambitious expedition, aimed at the salvaging of a second plate ship which had come to grief on the extensive Bahama Banks.

According to Snow,<sup>124</sup> though other authorities are less explicit, it was thanks to the good offices of Christopher Monk, the second Duke of Albemarle, that the King himself was ultimately prevailed upon to provide a ship. The terms of Charles II, however, were steep. In return for the loan of the frigate *Rose of Argier*, a Sallee prize taken in 1681, one-fourth of the value of any treasure that was recovered was demanded, in addition to the usual royalty (normally, one-half). Phips, who was in no position to argue, perforce agreed and accepted as a further condition that two trusted agents of the Crown, John Knepp and Charles Salmon, should accompany him.

The *Rose* sailed early in September, 1683, and reached Boston towards the end of October. Here it was learned on arrival that a Captain Warren, of the *Good Intent*, was in the midst of making preparations for a voyage to the Bahama Banks in search of the self-same treasure. Phips promptly called upon Governor Simon Bradstreet to exert his authority and forbid the departure of the vessel, and, when this demand was refused, he solved the problem by taking his rival into partnership.

Trouble then arose because of the disorderly behaviour of the *Rose's* crew, whose nightly rounds of the stews and taverns eventually ended in a drunken battle with the town constables, with subsequent accusations and counter-accusations of causing a riot. In the legalities which followed the claim of Phips that he and his men were in a privileged position and his pretences about their being under special orders from the King (which alleged instructions, however, he declined to produce for examination) were brushed aside by the Governor, who not only questioned the

existence of the supposed orders but proceeded to remind Phips that the people of Boston were well aware of his lowly origin and suggested that his assumption of such lofty airs was as unnecessary as it was unimpressive.

Phips also made himself highly unpopular by insisting (strictly against his orders) that other ships should strike their colours to him, even though the *Rose* was not officially serving as a man-of-war. The master of any passing vessel who withheld this courtesy nevertheless received a shot across his bows, until Phips at last met his match in a Captain Thomas Jenner, of the *Samuel and Thomas*. Jenner hauled the offender into court and challenged his authority to conduct himself in such a manner. His bluff called, and still being unable to produce the necessary papers (which he was now reduced to pretending that his wife had inadvertently taken abroad with her in a locked trunk!), Phips was fined the sum of £10 and, on his protesting that he was unable to pay, the impost was remitted in part until his return from the Bahamas, that the urgent private business of the King might not be delayed by the imprisonment of his impecunious servant. All things considered, the blustering Phips must have been as glad to depart from Boston as Boston was relieved to see the back of him.

Warren, in the *Good Intent*, had already left at the end of November and, a month and a half later, Phips sailed to join his partner. Knepp, the chief government agent, was not on board. After having been waylaid in the streets one night and nearly murdered by (he strongly suspected) two members of the crew of the *Rose*, by whom his duties made him hated and feared, he had deemed it prudent to remain behind in Boston and report on events from there. And, as it happened, the Crown was none the poorer for his absence, for Warren and Phips arrived at the wreck too late. A succession of ships had been there before them, and several vessels were still in attendance when they at last arrived. In the circumstances, little enough treasure remained to be salvaged and, according to figures quoted by C. H. Karraker,<sup>70</sup> in the reckoning which came later, the voyage of the *Rose* showed a gross return of £470 18s. 8½d.—against which had to be set a sum in excess of £700 for wear and tear.

With the failure of his mission, Phips soon had a serious emergency on his hands. As an alternative to the uninviting prospect of returning penniless to England, there to face the consequences of their many misdeeds (all carefully reported in great detail to London by the diligent Knepp, no doubt) the disappointed



Cocos Island: (*above*) the beach at Chatham Bay; (*below*) an aerial view of the interior





Thebes: (above) the Valley of the Tombs of the Kings; (below) the Valley of the Tombs of the Queens



members of his crew conceived a simple way out of their troubles: to remain in the Caribbean as gentlemen of fortune. To his credit, when Phips was approached, he declined, in no uncertain terms, to have anything to do with the proposal. But this was by no means the end of the affair for, some time later, when the *Rose* was careening on some convenient isle, the ship's carpenter contrived to give warning that a plot was afoot to seize the ship.

Less than a dozen men remained loyal to their commander—the rest were ashore, scheming in the woods. Worse, as a precaution against a possible Spanish attack, the cannon had been landed, though the unsuspecting malcontents, who thought to take advantage of this fact, had carelessly left them unguarded. Phips quickly had the guns brought back on board and, when the mutineers eventually emerged, it was to find that they had been outwitted. Disarmed and disillusioned, the troublemakers were turned off the ship at Jamaica, where, after engaging a replacement crew, Phips started for home.

On the way, however, he paid a visit to Hispaniola; and at Puerto Plata became friendly with a venerable Spaniard who, in the course of many conversations, revealed the location of another rich wreck, which was to be found, he assured his eager listener, among some dangerous shoals which lay off the north-eastern shores of the island. Phips was sufficiently impressed to make a tentative search forthwith, but, finding nothing, he decided that the wisest course would be for him to give his royal patron an account of his activities thus far and then, in the light of the information so recently acquired, persuade His Majesty to equip another expedition. But, unfortunately for this plan, by the time the *Rose* reached England, Charles II was no more.

The new monarch, James II, quickly made it clear that he was not interested in Phips or his latest plans. This unhelpful attitude was no doubt influenced by the failure of the earlier undertaking and by the highly critical contents of Knepp's despatches. These reports, indeed, had raised grave doubts as to the honesty of the New Englander who, in March, 1686, was required by Naval Commissioners Sir John Narbrough and Sir Richard Haddock to give his version of the affair, that the account might be submitted for the consideration of the Secretary of the Admiralty, one Samuel Pepys, who was in turn beholden to the Treasury.

In the end, it was the Duke of Albemarle, then hopelessly in debt and so desperate for money that the wild nature of the gamble mattered not at all, who came to Phips' aid. Albemarle sought and

obtained a proprietary interest, subsequently confirmed by patent, in

*. . . all flotsam, jetsam, lagan, bullion, plate, gold, silver, coin, bars or pigs of silver, ingots of gold, merchandises, and other goods shipwrecked and lost before July 16, 1689 on the north side of Hispaniola, about the Bahamas, or the Gulf of Florida*

with the exception of a tenth part, which was reserved for the Crown. Thus armed, the Duke formed a company, among its chief shareholders being Lord Faulkland and Sir John Narbrough. It was agreed that, after setting aside the royal tenth and a sixteenth for Phips, the remainder of any treasure that was recovered should be divided among the Adventurers, as they styled themselves, in proportion to their individual holdings. In all, more than £3,000 was subscribed, a sum which enabled two ships to be purchased (the *James and Mary* and the *Henry of London*) complete with the necessary equipment and sufficient cargo for purposes of trading to ensure against a total loss in the event of the wreck not being found. This possibility, no doubt, was also in the mind of the owner of the *James and Mary* when he refused the offer of a quarter interest in the venture in lieu of payment, though in Oldmixon's words 'he heartily repented it afterwards', as well he might, for by insisting upon cash (£1,500) he thereby became the poorer by some £48,500!

The expedition sailed on 12 September, 1686, with Phips in command of the *James and Mary* and with the *Henry* in charge of Francis Rogers, who had participated in the Bahama Bank attempt. After touching at Barbados, the two ships lost sight of one another on the way to Hispaniola, but both had come safely into harbour at Puerto Plata by mid-December. But, from the moment of his arrival, Phips appeared to be more anxious to engage in trade than to search for treasure—an indication, perhaps, of the extent of his expectation of ever finding it. At all events, a month went by before the *Henry* was sent to seek out and examine the reef described by the old Spaniard, and thus it happened that, while his leader lingered in port, exchanging baubles and serges for meat and hides, Rogers and his companions located the wreck and found the treasure!

Even so, the discovery came about by the merest chance. After arriving at the easternmost end of the bank and anchoring in ten fathoms of water, they made a careful search of its north side the next day and then cruised down the south side, finally coming to a

halt about a mile and a half south of the reef. From here the searchers set out by canoe and boat, accompanied by divers, and made for a place where the rocks were barely awash. No sign of a wreck was seen, but, on the way back to the *Henry*, someone observed a particularly fine specimen of a coral plant in the shallows below and, in the hope that it might interest the expectant Phips, a diver was sent down to fetch it. He returned with the exciting news that several great guns were to be seen in the vicinity and, in the immediate investigation which followed, various types of casts of silver, including dowboys and champeens, as well as sows and pigs, were located and brought to the surface.

The spot was buoyed, and for the next three days work went on without interruption, considerable quantities of silver being recovered, together with nearly 3,000 pieces and half-pieces of eight. Bad weather then made the situation of the *Henry* so hazardous that it was decided to return to Puerto Plata, where heavy seas made it impossible to enter the harbour until 8 February. Rogers hastened to report to Phips, putting on a doleful face and giving a long and discouraging account of fruitless searching among the banks and shoals. He was joined in this tale of woe by other members of the crew, who, while maintaining the pretence, surreptitiously slipped a sow of silver under the Captain's table.

When at last Phips saw it, according to Cotton Mather's account of the incident, he cried out in some anguish, 'Why? What is this? Whence comes this?' and, on being told of the discovery, exclaimed, 'Thanks be to God. We are made.'

A week of intense preparation followed. Then the two ships left Puerto Plata for the wreck, where they remained, busily at work, for a matter of six weeks, the divers bringing up a seemingly endless supply of coral-encrusted silver bars, gold ingots, plate, jewels and pieces of eight. In the midst of these operations two other vessels appeared on the scene, captained by William Davis and Abram Atherley, both of whom had assisted Phips at the Bahama Banks. Their help was once again enlisted, in return for a half share of anything they recovered.

Although the weather occasionally gave signs of worsening, in addition to which provisions were running somewhat low and the strain on the divers was beginning to show itself in ever-increasing bouts of sickness, what eventually brought work to a stop was the failure of Davis' sloop to return from a trip to Jamaica, where the vessel had gone to acquire a replacement rudder. There had been reports that a French privateer was on the prowl in the area and,

with the sloop overdue, Phips grew increasingly anxious. If, by any mischance, her valuable cargo had been captured, the next victim would undoubtedly be himself. Accordingly, loath though he was to abandon the wreck with her holds no more than half cleared, he deemed it prudent for the *James and Mary* and the *Henry* to depart for the Turks Islands, leaving Atherley to await the return of Davis or the appearance of the privateer, as the case might be. In the event, Atherley stayed behind long enough to bring up another two or three tons of silver and then hastened to the rendezvous himself, where he was in time to bid farewell to Phips and Rogers when they set sail for England on 2 May.

The *James and Mary* was the first to arrive, and she sailed up the Thames early in June, where she was met by Albemarle and other of the subscribers, all of them unable at first to credit either the fact or the extent of their unbelievable good fortune. Simultaneously, a horde of government officials descended on the vessel, which was placed under a strong guard while the Warden, Comptroller and other leading lights of the Mint set about the pleasurable task of weighing the gold and silver, that the amount of the royal tenth might be determined. All told, the bullion weighed more than 65,000 pounds (troy) and at 5s. per ounce for the silver and £4 per ounce for the gold, the value of the haul, exclusive of gem stones, amounted to more than £200,000.

The Duke of Albemarle, as the leading shareholder, received not less than £50,000 (a sum reportedly insufficient, alas, to clear his colossal debts), and the other participants likewise received payment according to the extent of their holdings, all showing a profit of about £10,000 for every £100 invested. Phips' share was in the region of £12,000—a goodly sum in those days—in addition to which the delighted Albemarle presented him with a gift for his wife in the shape of a £1,000 gold cup, while King James bestowed upon him a gold medal and chain, not to mention a knighthood.

The only discordant note was that sounded by the Spanish Ambassador, who, as in duty bound, demanded the immediate return of the whole of the treasure to its rightful owner, his master King Charles II of Spain. But no one, as Karraker remarks, would have been more surprised than this worthy gentleman had King James of England, in a moment of mental aberration, seen fit to comply with his request.

## IV

In the course of the last three centuries there have been not a few unsuccessful attempts to locate and recover that portion of the treasure which the discoverer was obliged to leave behind. A. H. Verrill<sup>135</sup> has described how, as recently as 1933-34, he conducted two trips to the Silver Shoals, apparently in the belief that Phips himself had made no effort to recover the abandoned riches and that subsequent searchers had failed to profit by his negligence because he had omitted to bequeath to posterity a chart indicating the position of the wreck. But this inviting thesis, alas, does not bear examination.

The facts are that the outstanding success of Phips' mission, apart from lending substance to the many rumours which had been circulating about disaster having overtaken one of the Spanish plate fleets, also disclosed to the world the place where some of the sunken treasure was to be found. For it was, of course, impossible to keep the whereabouts of the wreck a secret. Not only Phips but the entire company of the *James* and *Mary* and the *Henry* knew its location. More serious still, so did William Davis and Abram Atherley and their crews, not to mention the many native divers whose services had been enlisted and, though Phips had taken the precaution of swearing one and all to secrecy, he can have been under no illusions about what would happen the moment he sailed for England.

In the event, there was a mad scramble for the shoals as soon as the *James* and *Mary* and her consort vanished over the horizon, and the wreck was soon the scene of frantic activity, as scores of unofficial treasure seekers, armed with all manner of primitive equipment and many of them with no equipment at all, sought to enrich themselves while the going was good. Naturally enough, it was the local inhabitants who were first on the scene, and so great was the exodus from neighbouring islands that the economy of not a few of them was gravely threatened, as more and more people neglected their everyday work and took to searching for silver instead. So acute did the position eventually become, indeed, that in 1688 Governor Sir Robert Robinson, of Bermuda, called a meeting of his Council in order to decide how many more Bermudans could henceforth be allowed to visit the wreck 'without Debilitating ye Country'. By this time, however, not much treasure can have remained, for, the news of the discovery having echoed round the world, the coastal craft of the islanders had been joined by



FIG. 2. The Island of Hispaniola (modern Santo Domingo), Silver Bank and the position of the Phips wreck (marked by a cross). It lies some 66 nautical miles from Cape Francis, in latitude  $20^{\circ} 38'$  North. (Based on the latest Admiralty Chart of the Caribbean Sea.)

larger and better-equipped vessels, not only from New York and other ports on the North American seaboard but also from Europe and even from England—the *Elizabeth* and the *Richard and Sarah* were but two of the British-owned ships known to have headed quietly for the Caribbean shortly after Phips' triumphant return.

In London, meanwhile, Phips was not at all unmindful of the very considerable amount of treasure which he had been forced to leave behind; and he and his associates lost no time in making application to the King for a second grant of the Hispaniola wreck, and this, needless to add, was at once forthcoming. Under it, and in return for the protection of the *Assistance*, a well-armed ship of the line, the now much interested James demanded one-fifth of all that was recovered up to a value of £150,000 and one-third of anything in excess of this sum.

The expedition sailed at the end of August, 1687, with Sir John Narbrough himself in command aboard the *Foresight*, and with Edward Stanley, late of the *Bonetta*, as his lieutenant. Phips captained the *Good Luck*, other vessels being the *Princess*, the *James and Mary* and the *Henry*. Their rendezvous was Barbados, which, as it happened, Phips was the last to reach. He arrived to find that Narbrough had gone ahead with the three other vessels to Hispaniola, there to await the *Good Luck*, and it was while they were lying at anchor in Samana Bay that the unwelcome news was received that, even as they waited, more than a score of other vessels were clustered round the wreck!

Phips appeared at last on 7 December, and he and the other members of the expedition lost no more time in making for the shoals. They arrived to find the area swarming with craft and, although some of these made off at their approach, there remained eight ships and no less than twenty-four brigantines, sloops and shallops! Stanley, at Narbrough's command, ordered them away, though not before searching them for treasure, of which he found little enough—a forewarning of greater disappointment to come. For, as it soon became apparent, in the twelve months which had elapsed since the departure of Phips and his return, the wreck had been picked almost clean.

Despite weeks of unremitting effort, the searchers brought up only scattered coins, some bar silver and other odd items, which included the galleon's great guns. In his desperation, Phips developed the theory that if a certain coral formation could be removed it would give access to the plate room of the sunken ships and for a month or more he attacked the offending rock, first by

ramming it and then with grapnel and chains. He even attempted to blast it apart with a chest of gunpowder, but failed to devise an underwater fuse with which to ignite the charge.

Finally, on top of disappointment came disaster. At the beginning of May fever broke out on board the ships, and so serious did this become that the vessels were ordered to return to England. Narbrough alone remained at the reef, determined at all costs to continue the search, until, taken ill himself, he died before the month was out. Stanley then assumed command of the *Foresight* and began the long journey home the next day, bringing the little treasure that had been recovered with him. Apart from four great copper guns, it consisted for the most part of silver to the value of £12,000—a great deal less than the cost of its recovery.

Thus, neither the Narbrough nor any subsequent expeditions to the wreck brought a worthwhile reward, for the simple and sufficient reason that the treasure it supposedly contained was no longer there. On the other hand, the galleon which Phips had happened upon was almost certainly one of the fifteen plate ships lost in the great hurricane of 1642,\* and Verrill had this additional prospect in mind when, in the absence, as he thought, of reliable details concerning the location of the Phips wreck, he was reduced to estimating its probable whereabouts from chance remarks contained in the discoverer's journal. But, just as Verrill erred in supposing that Phips had made no attempt to recover the treasure he had left behind, so he was mistaken in believing that the position of the galleon was uncharted. Two years earlier, in 1932, H. T. Wilkins<sup>143</sup> had hinted as much when he claimed to possess clues derived from the *Log* of a British ship which had taken part in the early salvage attempts, though, as usual, he was unable to resist the temptation to make a mystery out of the matter. Presumably he was referring to the computation made by Captain Frederick Frowde, of the frigate *Swan*, who, after visiting the wreck in April, 1688, described it as lying in the middle of the reef in latitude 20° 38' North. The sunken vessel is to be found, that is to say, in a

\* Thus Karraker and others. Some give the date as 1643 and so bring it into line with our present calendar. Verrill, for reasons unknown, makes 1637 the year of the disaster, while Rogers<sup>115</sup> prefers 1641 and goes on to relate an apocryphal tale about a table of solid gold having been recovered by Phips, though other authorities (following the contemporary chroniclers, Peter Martyr and Las Casas) associate this unusual article of furniture with Francisco de Bobadilla, one-time Governor of Hispaniola. Bobadilla suffered shipwreck when he sailed for Spain at the beginning of the 16th century, and the table aforementioned is believed to have gone down with him, together with much other treasure, off the most easterly point of Hispaniola. According to R. D. Paine,<sup>161</sup> Phips was making plans to search for this valuable wreck at the time of his death.

central position on the far side of what is now called the Silver Bank (or Shoals), at a distance of 66 nautical miles from Cape Francis, Santo Domingo (Hispaniola).

It was in this dangerous neighbourhood that Verrill and his companions eventually anchored, with miles of jagged coral-heads, just awash in the ocean swell, stretching away into the distance on either side of them. The water beneath their keel, 10 fathoms deep, was so clear that objects on the sea-bed could be seen in the minutest detail, though, to expectant eyes in search of a wreck, the fantastic array of marine growths proved most deceptive; and time after time the supposed outline of a ship turned out to be no more than a natural formation of coral. But after little more than an hour of searching, first one anchor, then two more and also a great cannon were seen—evidence enough that the remains of a ship lay near by. Divers at once went down and, after much effort, the smallest of the three anchors was raised and brought aboard.

Locating the wreck and tracing its outlines proved to be no easy task, for, in the course of centuries, the galleon had become covered with a concrete-like shell of limestone, upwards of 2 feet in thickness and, thus camouflaged, it was all but indistinguishable from the surrounding reefs. It was only after making a long and painstaking examination of the ocean floor that the divers at last happened upon a massive iron sling which had presumably held the water-sail yard beneath the galleon's bowsprit. From here they accordingly worked their way aft, finding, among other innumerable oddments, pewter plates, grindstones, wine jars, a chest of tools, a sounding lead and a copper kettle, until at last they came upon the massive wrought-iron supports which had held the ship's rudder. At this spot, they reasoned, the strongroom of the galleon must be beneath their feet.

But all attempts to reach it failed. For one thing, the available equipment was ludicrously inadequate, consisting, as it did, merely of crow-bars and hammers. And for another, with every feeble underwater blow that was struck, the pulverised limestone rose in dense white clouds, obscuring everything within range and bringing work to a stop until it had settled. A whole week went by with little or no progress having been made, by the end of which time it was realised that drills and dynamite were needed and, in the absence of these items, it was reluctantly decided to postpone the attempt until the following year.

The second expedition was well equipped with pneumatic drills, grappling toggles, high explosives and a sand pump, in addition to

the usual diving suits and a compressor. In the light of his earlier experience, Verrill had also had three special dories built, each fitted with outboard motors and furnished with a central, open well, designed to obviate the need to lean over the side when using water-glasses. The only item which gave cause for concern was the salvage ship. This was not a conventional wrecking-steamer, as had been originally proposed, but a schooner owned by a member of the expedition, who professed to be a skilled navigator.

When at last the reef was reached, it was found that the ship was 20 miles off course and, as it was then late afternoon, there was nothing for it but to anchor. While the light lasted, opportunity was taken of this enforced stay to make an examination of the seabed in the vicinity—and almost at once an immense anchor and a number of cannon were seen! The search which followed brought to light ancient muskets, cutlasses, boarding axes and pistols, together with evidence which suggested that they had happened upon the remains, not of a galleon, but of a heavily armed man-of-war of somewhat more recent date. The vessel, at all events, had carried more than twenty-one guns, and a broad arrow stamped on the metal of several of the salvaged tools and weapons suggested that she had been British.

But this second find, though of interest, offered small possibility of treasure, and so no time was lost in making for the Spanish wreck, where, on arrival, the compressor and the diving gear were loaded into the launch. This vessel was then taken to, and anchored immediately above, the scene of operations, in readiness for an early start the next day. But during the night a sudden storm swept across the shoals and, although the cables of the schooner held, those of the launch did not. When she was next observed she was lying, with the diving equipment still aboard her, alongside the sunken galleon!

With his air line coupled to an auxiliary hand-pump, the chief diver went down to make an examination. He reported that there appeared to be little or no damage to the boat, and six empty oil drums were accordingly sunk and lashed to it and air pumped into them. Slowly the makeshift raft began to rise, but no sooner did it reach the surface than one of the drums burst at the seams, the lashings broke and the launch plunged to the bottom once again, on this occasion striking a jagged part of the reef and tearing a gaping hole in its side!

Though handicapped by the lack of the compressor and the pneumatic drills, resort to crow-bars and hand drills enabled a

number of explosive charges to be placed and fired. All manner of objects were thus revealed, ranging from hatchets and sword hilts to cutlasses, cannon balls and a weighty chest containing sheet lead. But it now appeared that the wreck was resting almost on her beam ends, thus making more difficult than ever any attempt to gain access to the strongroom. Moreover, the clouds of pulverised coral and limestone which followed every firing soon formed a thick carpet of sediment which the slightest movement on the part of the divers served to disturb, a problem which could not be tackled without the aid of the unusable sand-pump. And, in the face of these mounting difficulties and discouragements, the search was eventually abandoned.

Was this the wreck of the galleon earlier discovered by the Phips expedition? The importance of the question, as will be evident, resides in the fact that, if it was, the treasure seekers (although they did not realise it) were in all probability wasting their time; but that if it was not, their hopeful assumptions about the strongroom and its contents might well be worth following up. As to this, although Verrill, at the beginning of his account, romantically declaims about the improbability of any human eyes other than those of himself and his companions having looked upon the sunken vessel since the day she met her doom, he later expresses the view that the wreck actually was that found by his distinguished predecessor, though he still clings to the belief that as Phips had succeeded in salvaging barely half of the treasure, more than enough remained. And, all things considered, the likelihood of this view, though not the belief associated with it, may be accepted. Apart from the fact that Verrill, when planning his approach to the reef, had relied on such information as Phips provided and that the position, condition and appearance of the wreck were very much as the New Englander described them, there was the added significance of an almost complete absence of armament, coupled with the fact that cannon balls were found which did not fit the solitary gun which Phips had evidently overlooked.

But, however this may be, the remains of more than a dozen other ships belonging to the same fleet still await discovery. What are the prospects, at this late date, of their ever being found? Presumably the convoy was scattered by the storm which brought about its destruction, so that the missing vessels almost certainly foundered over a wide area. Accepting the probability of such a dispersal, the difficulties attendant upon the location of the wrecks after more than three centuries of immersion appear formidable

enough, especially when it is remembered that numerous searchers failed to find them not long after the disaster and that the successful outcome of the Phips expedition was due largely to a matter of chance. To-day, it must be expected that thanks to the spread of marine growths, the outlines of the sunken ships will have become indistinguishable from the coral reefs among which they are embedded, as, indeed, the findings of Verrill go to show. And it must also be remembered that Phips was fortunate in that his find lay in comparatively shallow water. The possibility that the remaining vessels are not so happily placed may add greatly to the problems of location and recovery.

Modern echo-sounding apparatus, in normal circumstances most efficient in depicting wrecks when it is employed for charting the seabed, could not be expected to distinguish between a natural reef and a coral-encrusted ship, though underwater television might be used in the expectation that it would reveal the less easily disguised outlines of guns and anchors. Again, the prospect of recovering valuable cargoes from great depths has been much improved in recent years, as was shown by the successful raising of the greater part of a consignment of gold ingots which went down with the *Niagara* in 1940, when she struck a mine and sank off the coast of New Zealand. The vessel was located (by sweeping) at a depth of 73 fathoms, well beyond the reach of divers encased in the conventional suit and helmet. The difficulty was overcome with the aid of a modern version of the ancient diving bell, fitted with observation windows and a telephone, whereby the occupant was enabled to direct the placing of explosive charges on the ship's hull. In this manner a way was blasted to the bullion room, located some 30 feet inside the wreck and a grab lowered into the hole. More than nine-tenths (£2,370,000 worth) of the sunken gold were thus brought to the surface.

From the success of this exploit it would appear that the biggest problem associated with the lost Spanish fleet concerns the question of location, rather than that of recovery. And it will also be evident that the enterprise is likely to require salvaging equipment far more elaborate and costly than the schooner, ordinary diving gear and pneumatic drills which the hopeful Verrill and his associates essayed to use in the early 1930s.\* On the other hand, the

\* In July, 1956, an expedition based at Palm Beach, Florida, was reported to be planning an extensive exploration of the Caribbean in search of sunken treasure, assisted by radar, metal locators, searchlights and underwater television. This equipment was to be used in conjunction with two converted naval torpedo boats, a salvage tug, a two-man submarine and a helicopter!

anticipated reward, collectively estimated to amount to more than £10,000,000, at any rate holds out some hope that the venture could be made to pay. Phips, meanwhile, has shown the way; and his expedition remains one of the few examples of a privately organised treasure hunt which is known to have enriched its subscribers.

On his death his achievement was fittingly commemorated, and visitors to Lombard Street, in the City of London, will find in the church of St. Mary Woolnoth a tomb upon which there is inscribed, in part:

*Near to this place is interred the body of Sir William Phips, Knight, who, in the year 1687, by his great industry discovered among the rocks near the Banks of Bahama, on the north side of Hispaniola, a Spanish plate-ship, which had been under water forty-four years, out of which he took in gold and silver to the value of 300,000 pounds sterling; and with a fidelity equal to his conduct, brought it all to London where it was divided between himself and the rest of the Adventurers. . . .*

## CHAPTER FOUR

### COCOS ISLAND CACHE

*Proposition: That much pirate loot lies concealed on the Pacific Island of Cocos, consisting in part of the sensational treasure of Lima, the so-called City of Kings.*

#### I

Cocos ISLAND in the Pacific (not to be confused, as it often has been confused, with the Cocos Keeling Islands in the Indian Ocean) is an isolated and uninhabited volcanic protuberance, located not far north (about five degrees) of the Equator. It lies nearly 300 miles to the south-west of Costa Rica, which claims suzerainty over it, and has a diameter of some 4 miles. At its highest, the island rises to almost 3,000 feet, from which point the ground descends in relatively gentle slopes to the crest of steep cliffs, 600 feet high, rising sheer out of the sea. Thanks to frequent and torrential rainfall, there exists an impenetrable tropical jungle growth, through which numerous streams make their way, ultimately to pour over the edge of the island's precipitous perimeter in a multitude of spectacular waterfalls. In two places on the north coast the rock walls have been so eroded as to give rise to sandy beaches—Wafer and Chatham Bays, named respectively after the pirate surgeon Lionel Wafer<sup>137</sup> and an armed tender which accompanied George Vancouver on his visit to the island in the *Discovery*, in 1795. Elsewhere the cliffs are honeycombed with sea caves and, in one instance, a headland is pierced by a natural tunnel through which it is possible to row a boat.\*

The discoverer of Cocos Island is unknown, but its name, so Wafer informs us, comes 'from its Coco-Nuts, wherewith 'tis plentifully stor'd'. Years ago the Costa Rican authorities sought to establish a penal settlement on the island, and there was even an attempt at colonisation, but today the only permanent residents are numerous birds, countless insects, swarms of rats, troops of

\* The headland, known as Morgan Point, forms the easterly, *i.e.*, the right arm, of Wafer Bay. L. J. Chubb,<sup>138</sup> gives the length of the tunnel as 'one or two hundred yards', but C. L. Collenette,<sup>139</sup> who ventured through it, says 'some thirty yards'. It gives access to a rocky inlet which has numerous small caves opening from it.

land-crabs, some goats and herds of pigs, once domesticated, but long since gone wild.

According to William Beebe,<sup>9</sup> Cocos first appeared on a map by Nicholas Desliens in 1541. Its exact location, however, for long remained in doubt and, as late as 1615, at least one chart showed it lying south of the line. This uncertainty as to its exact position, coupled with the navigational shortcomings of the times, made the place difficult to find, even by those buccaneers whose favourite haunt it became. But here, once the island had been reached, the freebooters could rest, or careen their ships, in perfect seclusion, fortified by the fruits of the coco-palm and an abundance of fresh drinking water. And here, according to popular account, they also brought and buried much of their loot.

Notable among the pirates who at length forsook the Caribbean for the Pacific was Captain John Cook, who set sail from Chesapeake Bay in the *Revenge* in August, 1683, accompanied by such kindred spirits as Edward Davis, William Dampier and the aforementioned Wafer. They first headed for the African coast, where they took the opportunity to exchange their own vessel for a more powerful (36-gun) Danish ship, which they christened the *Bachelor's Delight*. North of Valdiva they encountered the *Nicholas* (John Eaton, Master) and together went to the island of Juan Fernandez. Their next call, after taking several prizes on the way, was at the Galapagos Islands, on the Equator, where John Cook was taken ill. A subsequent attempt to reach Cocos was unsuccessful, thanks in part to adverse winds and, off the Gulf of Nicoya, Captain Cook died. He was replaced by Edward Davis, who had hitherto served as quartermaster.

In the series of raids on shipping and coastal towns which followed, the *Bachelor's Delight* was joined by the *Cygnet*, whose Captain, Charles Swan, was ostensibly on a trading mission and, after four vessels had been captured at Guayaquil, a blockade of Panama was begun. While thus employed the pirates were joined by strong French and British contingents, some of whose members had crossed overland *via* the Isthmus, and these reinforcements brought the fleet up to ten ships, with a total personnel of nearly 1,000. This potentially formidable force, with Davis in supreme command, awaited the arrival of a Spanish treasure fleet. But the convoy, warned of their presence, first landed its precious cargo at La Villa and then sailed on to engage the enemy, though the action which followed was indecisive.

The buccaneers then turned their attention to easier prey and,

after attacking and burning the inland city of Leon, where they obtained little enough reward for their trouble, the group split up. The *Bachelor's Delight* repaired to Cocos, where Captain Davis and a couple of trusted lieutenants reportedly went ashore in Chatham Bay, taking a number of heavy chests with them. In his account of the visit to the island, however, Lionel Wafer makes no mention of this. Rather is he concerned to comment on the abundance of coco-nuts and on the many springs of clear water which added so greatly to the pleasures of their stay. . . .

A second pirate hoard which supposedly found a hiding-place on the island is associated with a bloodthirsty scoundrel who rejoiced in the name of Bonito Benito. According to one account, after serving aboard a Spanish privateer, he became the mate of a Portuguese trading brig and in 1816, after a quarrel with the Captain, whom he slew, he took command of the ship. Having thus launched himself on a piratical career, he attacked an English slaver, the *Lightning*, which he captured and to which vessel he transferred his flag, renaming her the *Relampago*. Most of the slaver's original crew did not survive this forcible change of ownership, but two men—Chapelle, a Frenchman, and Thompson, an Englishman—saved their lives by electing to join the pirate.

Benito then began a rampage which made his name feared up and down the Pacific shores of the Americas and, after a series of raids upon coastal towns, he learned of the impending removal of a large consignment of gold from Mexico City. Disguised as muleteers, he and his men seized the shipment, transferred it to the *Relampago* and set sail for Cocos. Here, report has it, after serious trouble had arisen over the allotting of the spoils, the treasure was divided into three portions, the leader hiding his share in a cave. Later, Benito took the opportunity of leaving the leading troublemakers stranded while they were ashore on the mainland and, of the malcontents thus abandoned to their fate, only two escaped execution at the hands of the authorities: Thompson and Chapelle, who pleaded, with some justification, that they had been forced into piracy, if not exactly against their will, then at any rate with considerable misgivings. Subsequently, Thompson is said to have taken up residence in Samoa and to have changed his name to McComber, while Chapelle was last heard of in San Francisco in 1841, where, prior to departing for the South Seas, he left behind certain papers which purported to relate to hidden treasure. Benito, meanwhile, was cornered by the British corvette *Espiègle*

and, rather than surrender and be hanged from the yardarm, he blew out his brains on his own quarterdeck.

The third and reputedly the most valuable of the Cocos Island treasures is associated with Lima, for centuries the seat of government in Spanish America. The city was founded in 1535 by Francisco Pizarro himself, who chose its site on the Rimac (from a corruption of the name of which rivulet Lima is derived), 8 miles inland from its port of Callao, which came into being two years later. And into it there poured the riches of the hinterland, much of which wealth was destined for Spain, though not inconsiderable quantities of it contrived to remain. Tradition has it that Lima's old 'Street of the Merchants' was paved with silver and, however this may be, the ostentation of its leading citizens, both ecclesiastical and lay, was proverbial.

During the first half of the 19th century the city and its vast accumulation of riches were gravely threatened by the approach of enemy forces; and the prospect of capture sent a stream of treasure to Callao, there to seek refuge within the walls of the great stronghold of San Felipe, or to be loaded on to whatever ships happened to be at anchor in the harbour. One such vessel, which reportedly received some \$12,000,000 worth of gold and silver, was the brig *Mary Dear*, and the temptation offered by this cargo proved to be too great for the Captain and his crew. They slipped away in the night and headed for Cocos Island, there to secrete the treasure only a few hours before a Peruvian gun-boat caught up with them. Most of the culprits were given their deserts forthwith, but the Captain and his mate were spared that they might lead their captors to the place of concealment. But, once on the island, the two men made a dash for it and soon lost their pursuers in the dense undergrowth. Several days of fruitless searching followed, after which the gun-boat departed, leaving the fugitives marooned. However, they managed to remain alive until they were rescued by a ship which put in for supplies of fresh water, though by this time the mate was so weak that he did not long survive being rescued.

The Captain is next heard of in 1844, on board a vessel bound for Newfoundland, in the course of which journey he became friendly with a man named Keating, at whose house he stayed on reaching St. John's. Here the stranger let it be known that he knew the whereabouts of a considerable treasure, and Keating arranged for a local merchant to provide a vessel. The merchant stipulated that the ship—the *Edgecombe*—should be in charge of a Captain Boag, but no sooner was this agreed than Keating's guest

was inconsiderate enough to die, leaving his erstwhile host with a map and a head full of verbal directions. More complications were to follow for, when the awaited ship arrived at St. John's, her Master, Captain Gault, declined to relinquish his command in favour of Boag and, in the event, the vessel sailed with both these gentlemen on board, between whom much ill-feeling developed.

At Cocos, Keating and Boag rowed themselves ashore and quickly located the treasure, which was stored in a cave. Much of it consisted of church ornaments, and one item, a solid gold statue, was so heavy that even the combined efforts of the two men could not lift it. Transportation obviously presented a problem and, for the moment, they contented themselves with taking a handful of coins and returned to the ship. Once on board, Boag lost no time in exhibiting their find, his argument being that it was better to test the reaction of the crew before there was any disclosure of the hiding-place. The wisdom of this at once became apparent, for Captain Gault and the men forthwith demanded a share of the treasure and hastened ashore in search of it. They returned empty-handed and, in response to threats, Keating and Boag agreed to lead them to the place of concealment in the morning, having in the meantime provisioned a whale-boat and made plans to slip away during the night.

Alone and in darkness, the two men made their way back to the cave and stuffed their pockets with as much gold as they could carry. Boag so overloaded himself that it cost him his life, for, so Keating subsequently reported, in wading out to the whale-boat he slipped and immediately sank out of sight. His companion managed to put out to sea and was picked up three days later by a Spanish trading schooner and landed on the Mexican coast, whence he made his way back to Newfoundland. For the gold he carried, we are told, he obtained £2,500.

In the course of the next two years Keating formed an association with a shipping merchant named Stuart, and a second trip to Cocos was arranged, under the guise of a pearl-fishing expedition. But on this occasion the ship's crew divined his intention as soon as Cocos Island was sighted and, like their predecessors, demanded a share of any treasure that was found. Keating let it be known that the gold was hidden in the vicinity of Wafer Bay and, having landed there with the men, quietly vanished. Once again there followed a fruitless search which ended in the vessel sailing away. Their quarry, meanwhile, revisited the cave, collected as much gold as he could conceal on his person and was eventually

taken off the island by a passing vessel and so returned once again to Newfoundland.

Back in St. John's Keating was now something of a marked man, and his habit of setting out on mysterious journeys from which he returned alone and enriched, was the subject of much local comment—it was even whispered that the death of Captain Boag had not been as accidental as had been made out. Keating thus found it increasingly difficult to obtain a hearing for his story, and when, some twenty years later, he told it to a Captain Nicholas Fitzgerald, his listener, though much interested, declined to accompany him on another trip to Cocos: Fitzgerald had no wish to share the fate of Boag. Keating, though disappointed, was nevertheless grateful to Fitzgerald, who had befriended him during a period of illness following a shipwreck in Codroy Bay, and before he died he disclosed to his benefactor the whereabouts of the hidden gold, directing him to make for Chatham Bay.

Fitzgerald, however, was not alone in believing himself to be the possessor of the dead man's secret. Keating's second wife, of whom it has been said that she fell in love with her husband-to-be while peering through his cottage window, watching him counting a large heap of gold coins, afterwards pestered him for years in an attempt to learn the source of this wealth. And with Keating's death and her remarriage to a man named Brennan, she claimed to possess papers which indicated that the treasure was to be found, not in Chatham, but in Wafer Bay. Fitzgerald, who subsequently examined the documents in question, maintained that these directions were worthless, for, while Keating had no cause whatever to deceive him, he had every reason for misleading his shrew of a wife. As for the mysterious Captain from whom Keating had learned the whereabouts of the treasure, his name was Thompson—according to some, the same Thompson who, with Chapelle, had been an associate of the notorious Bonito Benito.

Thus was the stage set for the many strange scenes which were soon to be enacted on the lonely Pacific island.

## II

August Gissler, a German seaman and the only person known with any certainty to have discovered gold on Cocos—a solitary doubloon minted in the reign of Charles III of Spain—first heard mention of there being treasure on the island in 1880. He was then a member of the crew of a ship taking Portuguese immigrants to Hawaii, and during the voyage he formed a friendship with one of

the passengers. In the course of conversation the Portuguese let it be known that his grandfather had served at sea under a piratical fellow countryman by the name of Benito and had helped to bury some loot on a Pacific island called Las Palmas—according to some papers now in the possession of the speaker. His companion, with the owner's consent, copied the manuscript and then forgot all about the incident.

Gissler himself settled at Hawaii and, some eight years later, another friend of his chanced to mention that his father-in-law, an aged white man who went by the name of 'Old Mac', owned a chart which showed the location of some buried treasure. At this, Gissler remembered the papers which he had copied on board ship and, from a comparison of the two documents, there seemed to be little doubt that Las Palmas and Cocos Island were one and the same. The two friends thereupon decided to investigate and journeyed first to San Francisco and from there to Puntarenas, where they hoped to find a ship which would take them to Cocos. Almost the first people they encountered were two penniless Canadian journalists, looking for work, who confessed that they had just returned from the island, where they had been searching for treasure!

Gissler's friend had brought his young son along and, while the three of them were waiting for a suitable boat to turn up, the boy was taken ill with fever and his father decided that there was nothing for it but to take him back home, leaving Gissler to make his way to Cocos alone. Undismayed, Gissler eventually secured passage on a Swedish barque, bound for Valparaiso. In the vicinity of Cocos, however, the ship first became becalmed and then drifted away, with the result that the would-be treasure hunter found himself at the vessel's Chilean destination!

Here, his story led to the formation of a company and to the chartering of a ship whose Captain and crew were to receive a share of the gold in lieu of wages. This vessel duly anchored in Chatham Bay, but, when a fortnight had passed and the anticipated riches were still not forthcoming, the Captain decided that perhaps cargo-carrying was, after all, a more reliable business. He accordingly left Gissler on the island with three companions, together with such food supplies as could be spared and a promise that the four men would be picked up at some future date. In the event, more than half a year went by before a vessel arrived to take them off, long before which their provisions had been exhausted and Gissler and his companions found themselves more preoccupied

with hunting for something to eat than with searching for hidden treasure.

It was after making a second trip to the island in the following year that Gissler realised that finding the hidden gold was not going to be the easy task he had anticipated. He accordingly planned a long-term operation and, to this end, acquired Costa Rican citizenship, prevailed upon the authorities to make him Governor of Cocos and to declare him the owner of a considerable portion of it, with a monopoly interest in treasure hunting. In return for all this he undertook to supervise the colonisation of the island and in 1894 he found himself back there once again, on this occasion accompanied by a wife and six families of hopeful colonists. Later, seven more families arrived. And later still, most of the Governor's subjects departed, somewhat disillusioned, leaving the Gisslers and a peon or two in sole, but by no means undisturbed, possession. For no sooner had they established their modest settlement in Wafer Bay than a seemingly endless succession of rival treasure-seeking expeditions began to arrive, whose members, more often than not, were impolite enough to start excavating without the formal consent of the island's Governor and part owner.

Among the first of these unwelcome arrivals was Keating's widow, who reached Cocos in 1894 accompanied by a Captain Hacket, on board the *Aurora*. The vessel had set out from Vancouver forty-three days earlier and, many hardships having been endured on the way, tempers were no doubt short from the onset. Mrs. Brennan, convinced that she knew precisely where the treasure was to be found, nevertheless inexplicably failed to produce it, and in the end her exasperated companions were ungentlemanly enough to make a thorough search of both her luggage and her person, in the belief that she was withholding vital information.

In 1896, according to an account he later gave of his movements, a lone American landed on Cocos from one of the Government supply boats which, revolutions and other such interruptions permitting, made more or less regular six-monthly visits to the island's colonists. The visitor claimed to be in possession of an official permit to search for treasure, a privilege which, regardless of Gissler's agreed monopoly rights, it soon became evident that the authorities were willing to issue to all and sundry.

The intruder was still on the island when, some nine months later, the *Aurora* once more arrived, on charter to a group of

treasure hunters from Victoria, British Columbia, and it was arranged that he should return to Canada with members of this party when, tiring of their exertions, they abandoned the quest. During the voyage, one of the crew, by name Jim Dempster, was taken seriously ill, and the American, in his role of passenger, offered to look after the sick man. It was while so engaged that he casually informed his patient that he had discovered the treasure and was anxious to meet a trustworthy boatowner, with a view to their going back to the island to collect the gold! Dempster, momentarily invigorated by this unexpected and exciting news, later suffered a relapse and, knowing himself to be dying, wrote a letter addressed to a friend of his. This read, in part:

*The bearer of this note is Mr. George Haffner, who knows the position where the great treasure lies on Cocos. Believe in him, and he will make you a rich man.*

In the summer of 1897 Captain John Claus Voss,<sup>136</sup> who was later to achieve considerable renown as a result of his exploit in sailing round the world in the *Tilikum*, a 38-foot long dug-out canoe, was sitting in an easy-chair in the Queen's Hotel, Victoria, B.C., when he was approached by a stranger who, after enquiring if his name was Voss, handed him a letter, saying it was from an old friend who had died at sea two weeks earlier and with whom he had been during his last moments.

Voss, after listening to Haffner's story, asked why he had not brought the treasure back to Victoria on the *Aurora*, to which the American replied that he had hesitated to reveal his secret to a party of strangers, especially as he had taken a dislike to their leader. But if Voss would be prepared to provide a suitable vessel and sail with him to Cocos, he could have one-third of the treasure, a share equal to his own—in accordance with the terms of his search permit, the other third would go to the Costa Rican Government. Haffner added that the hidden hoard contained some fifty tons of gold and that he estimated that they would each be enriched to the extent of about £2,333,000. Finally, he produced a chart of the island, marked with cross bearings showing the position of the loot and gave a detailed description of where it was buried.

Not unwilling to be convinced that a fortune was about to find its way into his somewhat depleted bank account, Voss began a search for, and eventually found, a 100-ton schooner. Haffner, however, expressed the view that the vessel was not really suitable

for so valuable a cargo, and it then appeared that he entertained much more ambitious ideas. This was confirmed when he calmly announced one day that he had been able to make more suitable arrangements—he was to be taken to Cocos in the flag-ship of a British Admiral, no less—and that he was sorry, but that in the circumstances he would no longer need the other's services.

To Voss, who, since his encounter with the American, had adopted a carefree style of living more in keeping with that of a prospective multi-millionaire, this was hard news indeed. Nor could he at first credit that a British Admiral would engage ships of the Royal Navy in a search for treasure. But the fact, highly improbable though it seemed, was nevertheless true, as Voss quickly discovered. Haffner, it appeared, had been at pains to make the acquaintance of some of the officers of H.M.S. *Imperieuse*, the flag-ship of the North-West British Squadron and had been a guest on board one evening when the conversation in the ward-room turned to Cocos Island and the pirate loot which was supposed to be buried there. It was then that the American caused a sensation by declaring that he knew the whereabouts of one such hidden hoard and needed only to set foot on the island to be able to retrieve it. At this, some of the officers entreated their Commander, Admiral Henry St. Leger Bury Palliser, to undertake the trip, pleading with such success that three days later the *Imperieuse* left Esquimalt Harbour with Haffner on board and with the cruiser *Amphion* for an escort.

The two vessels anchored in Wafer Bay and, armed with Haffner's permission to search, the Admiral appears to have adopted an exceedingly high-handed attitude. In the absence of Gissler, who happened to be away on one of his periodic visits to the mainland, his wife was placed under what amounted to house arrest, despite her protests that this part of the island was private property, while 300 sailors and marines were landed, to spend several days tunnelling and blasting the hillsides—without, however, finding any trace of the promised treasure.

When Gissler returned, to learn that in his absence his domain had been invaded, his wife imprisoned and many of his crops ruined by the Armed Forces of an alien power, he not unnaturally took a very poor view of the incident and reported it to the Costa Rican authorities, who, in turn, made a formal complaint to the British Government, alleging an unwarrantable infringement of territorial rights. As a result, the Admiralty severely reprimanded Admiral Palliser, whose retirement as Commander-in-Chief of the

Pacific Station followed in 1899, and it was decreed that henceforth Cocos Island was to be avoided by British naval vessels. But the unrepentant ex-Admiral, once he had relinquished his command, was left free to pursue his treasure-seeking inclinations as a private citizen, a circumstance of which he hastened to take a full advantage, as will in due course be told.

Mention must first be made, however, of another sequel to the affair. Three months or so after Voss had watched disconsolately as his dreams of wealth sailed out of Esquimalt Harbour, he received a letter from Haffner, addressed to him from Acapulco, Mexico. The letter explained that, on the way to Cocos Island, an officer, in the course of a discussion about the treasure, had asked him if he knew what would be done with it. Haffner, who expected that the gold would be taken back to Victoria, as arranged, was greatly disturbed to learn that, as it was being shipped in a man-of-war, the Admiral would have no option but to hand it over to the British authorities, who would, in turn, be in duty bound to return it, not to Costa Rica, but to the Peruvian Government, to whom the treasure rightly belonged. On hearing this, Haffner privately decided that in the coming search the gold would not be located with any assistance from him and, in the event, the quest was soon abandoned.

In giving this account of his recent activities, Haffner expressed his regret at not having accepted the offer of the 100-ton schooner, renewed his previous invitation and asked Voss to procure a suitable ship and meet him in Mexico as soon as he was able. Nor did he ask in vain. Unmindful of the cavalier treatment to which he had earlier been subjected, Voss, whose need of the promised £2,333,000 was now particularly urgent, selected a 10-ton sloop called the *Xora*—a small enough vessel in which to make a journey of 4,000 miles, but all that he could afford at that moment—and set off for Acapulco with two companions. Three weeks later, after having weathered one severe storm, they were compelled to seek shelter up-river at San Blas by a second tempest, and it was during their enforced stay here that some disturbing news reached them from Acapulco: George Haffner was dead!

The three considered the situation. Cocos Island was still some 1,600 miles away and there was now no one to guide them to the treasure. On the other hand, having come so far, it seemed pointless to turn back, especially as Voss had memorised the essential details shown on Haffner's chart. So they continued the journey, reaching their destination in less than a month, where they an-

chored in Chatham Bay. They then took the dinghy to Wafer Bay, where the treasure, according to Haffner's information, was supposed to be hidden and where Gissler quizzically watched their approach.

He came out to meet them, a tall, bearded figure and, after asking where they were from, added, 'After the treasure, of course?'

However, he raised no objection to their making a search and, on learning the size of their vessel, assured them that it would not hold a fifth of the gold that was buried on the island. But they were spared the mortification of having to leave most of the treasure behind for, despite a fortnight of intensive searching, they found nothing at all!

### III

Nicholas Fitzgerald, meanwhile, had been trying to raise some interest in his version of the hiding-place of the Cocos Island treasure by writing, or rather by sending (for the correspondence was actually undertaken on his behalf by J. T. Lawton, Principal of the Harbour Grace Academy), a stream of letters on the subject to various influential people. Among those approached in this manner were a naval Captain by the name of Watt (who failed to reply); Commodore Curzon Howe (who likewise took no action, but of whom more anon); and a number of others who allowed themselves to be lured to Cocos by the story—Arnold Gray, Hervey de Montmorency<sup>94</sup> and the indefatigable Admiral Palliser among them.

Fitzgerald had been quick to approach the last-named when, following his escapade in the *Imperieuse*, the story got into the newspapers. In his first letter to the Admiral Fitzgerald requested information about the position of certain creeks and bays on Cocos and, in the course of an exchange of letters which ensued, he related the story of his encounter with Keating. After enquiring into his informant's background and checking as many as he could of his statements, Admiral Palliser at length gave an undertaking that, if he were entrusted with the secret of the whereabouts of the treasure, he would not reveal the details to anyone other than a member of an expedition to the island, and guaranteed that, in return for the information, Fitzgerald would receive 5 per cent of the value of anything that was recovered.

On receiving this double assurance, Fitzgerald wrote, directing that the coastline of the bay in the north-east of the island should be followed until a creek was reached. From the high-water mark of

this creek, the course of the stream should be followed inland for seventy paces in a direction west-by-south. At this point, and at this point only, a gap in the hills would be visible and, by turning north and crossing the stream, a high rock face, smooth like a wall, would be encountered. In the side of this cliff, at the height of a man's shoulder from the ground, a small crevice would be seen, into which an iron bar should be inserted and levered outwards. There would thus be revealed an opening which led to a cave, in which would be found gold and silver coins, church images and crucifixes.

Fitzgerald, in a letter dated 23rd May, 1898, added:

*The cave, if found without the door being damaged or blown up, will surprise all who see it, on account of the ingenious contrivance and workmanship, possibly done by Peruvian workers in stone, whose skill was noted. In Keating's words, the cave is between twelve and fifteen feet square, with sufficient standing room. The entrance to it is closed by a stone made to move round in such a peculiar manner that it sets into the rock when you turn it, leaving a passage through which one man can crawl into the cave at a time, and when the stone is turned back into its place, the human eye cannot detect it; it fits like a paper on a wall. . . . Keating told me that the first time he went to the island he had no trouble in finding the cave; but the second time, there had been a disturbance or eruption which changed the features of the place, but he found it all the same.*

The contents of this letter were subsequently published by Montmorency, who was one of half a dozen treasure seekers who accompanied Palliser on his second expedition to the island. Montmorency also recounts how the Admiral made extensive enquiries which brought to light other clues to the hiding-place, a particularly useful source of information being an unnamed 'Swedish gentleman' (Captain Lars Peter Lund?) who had made a life-long study of the question, in the course of which he had paid several visits to Cocos. It was he who provided copies of extracts from the *Log of the Relampago*, the information, earlier referred to, which Chapelle was said to have left behind in San Francisco. From this it seemed that, when at Cocos, the pirate vessel had anchored in a bay between a cone-shaped rock and a small islet which had the appearance of a squatting lion (Breakfast Island). Then followed the enigmatic statement:

*A large sandstone boulder in the south-west of the bay; one hundred and forty fathoms, north-west-by-west; thirty-five fathoms,*



FIG. 3. Cocos Island, in the Pacific. Many of its points and headlands have been named in addition to those indicated, but on official charts much of the coastline is still shown by dotted lines, while the interior is merely described as being 'densely covered with trees and bushes'. (Based on the U.S. Government Chart of 1945.)

*west-by-south; eighty feet north and thirty feet from the black crag.*

Finally, Palliser received information about a series of expeditions which had been made to the island in the 1870s, all of which had been accompanied by a young seaman by the name of Bob Flower. While ashore on the last of these trips he had slipped and fallen down the steep bank of a stream—and landed facing a wall of stones, behind which was an extensive crevice, containing gold ingots and coins. Flower pocketed some of the money and, after replacing the stones, took a rough note of his position. The stream he had been following ran seawards in an east-north-easterly direction and, from its mouth, the arm of Chatham Bay on his right bore due east. But, before he could profit by his discovery, the finder was drowned in the wreck of one of the Pacific Steam Navigation Company's steamers, though a shipmate called Alexander afterwards claimed to have seen some of the recovered coins.

Throughout his account Montmorency discreetly refers to Admiral Palliser as Captain Shrapnel of H.M.S. *Haughty*, saying of his 1897 visit to Cocos\* merely that it was undertaken at the instigation of an American guest and that 300 sailors and marines were landed at Wafer Bay, to the profound displeasure of the Admiralty. Later, in a reference to the many visits made by other treasure seekers to the island, there is mention of the fact that the members of some of these expeditions behaved with scant courtesy to Gissler and that, on one occasion, a British man-of-war landed sixty marines, who threatened his wife and tore up his crops during his absence. Disingenuously or otherwise, however, Montmorency makes not the slightest suggestion that the pseudonymous Captain Shrapnel was himself the culprit!

Seemingly, it had been Palliser's original intention to follow up the various clues in his possession with the assistance of a friend named Grant, and their first move was to send a trusted agent to Panama, the idea being that he should journey to Cocos and prepare the way by verifying the various landmarks and, if possible,

\* Whereas Montmorency merely says that Captain Shrapnel, i.e., Admiral Palliser, first heard rumours of the existence of treasure on the island in 1896, R. D. Paine<sup>101</sup> and others<sup>8, 114, 143</sup> appear to have taken it for granted that this was the year of his visit. Voss, however, gives the date as 1897, and in this he is supported by such records as are now available. Although no *Log* for the *Impérieuse* can be traced for the two years in question, the Admiralty Digest relating thereto (IND. 21128 and 21143) contains an entry on 22 October, 1897, which refers to the passage of a Mr. Harford (i.e., the Haffner of Voss) for Cocos Island to look for buried treasure—according to information provided by the Public Record Office (private communication, 27 August, 1959).

locate the treasure. But, following a series of mishaps which culminated in the illness of this emissary, the plan miscarried. Grant himself then went to Costa Rica, but fared no better for, when he arrived, a revolution was in progress and transportation to the island was impossible to obtain. Ultimately the problem was solved, towards the end of 1902, when six gentlemen, of whom Hervey de Montmorency was one, associated themselves with Palliser, it being agreed that they should collectively subscribe sufficient funds to enable a special vessel to be chartered.

But even in this there were difficulties, if needless expense was to be avoided. Enquiry revealed that there was no prospect of obtaining a suitable ship and a satisfactory crew, having regard to the nature of the enterprise, anywhere along the western coast of Central America. Accordingly, a Liverpool firm of shipowners was approached, with whom it was arranged that one of their cargoes should be sent to Salina Cruz in a steamship, an uneconomic procedure which would be assisted by a subsidy from the Adventurers, as these successors to Phips, Albemarle and Company also described themselves. The arrangement was that, once the cargo had been discharged, the vessel would be at their disposal, conveniently situated within five days' steaming of Cocos, for a period of one month. For their part, the shipowners purchased the *Scotia* from the Anchor Line and renamed her the *Lytton*. And, after loading fuel at Swansea and cement at Antwerp, the vessel headed for Salina Cruz, where she was due about the middle of July.

Another problem which now had to be faced concerned the question of a permit. At first it had been proposed to dispense with this, until some legal mind pointed out the unwise of the omission. For one thing, the disposal of the gold would be impossible without official sanction and, for another, the expense of insuring the ship against loss or damage during what would amount to an act of piracy would be prohibitive. Accordingly, a representative was sent to the Costa Rican Legation in Paris and, on 1 May, 1903, an agreement was signed which gave permission for the Adventurers to search for one year on the island, to the exclusion of all rival expeditions. In return, the Government of Costa Rica was to receive one-half of the value of any treasure that was found.

This irksome formality having received attention, the Adventurers made their several arrangements for keeping their appointment with the *Lytton*. In the interests of secrecy the party split up into two groups, three of their number travelling by way of New

York, and the other four, including Palliser and Montmorency, taking a French steamer from St. Nazaire, the plan being that they should all meet in Mexico City prior to travelling overland to Salina Cruz together. As it happened, the *Lytton* was delayed by storms but, on 4 August, the last lap of the journey to Cocos began, and five days later Chatham Bay was reached. An immediate landing was made and, armed with their various sets of clues—Fitzgerald's instructions, the Chapelle extracts from the *Relampago's Log* and the bearing taken by Bob Flower—the search for the hidden gold began.

Their starting-point, as directed, was a creek whose waters entered the sea by way of a valley, up which they travelled by wading along the bed of the stream. But nowhere, and certainly not within the stipulated distance, could they find any suggestion of a gorge or other rock formation, nor, such was the nature of the surrounding terrain, did it appear possible that the expected feature could exist anywhere in the vicinity—as well, comments Montmorency, expect to find a field of barley in the midst of Piccadilly. And at three o'clock in the afternoon of their first day ashore, assisted on their way by torrential rain and a voracious partiality for human flesh shown by thousands of red ants, they retreated to the ship in order to discuss the situation.

It was realised that, in the course of more than half a century, the landscape could have changed very considerably, but even so, the conclusion nevertheless seemed inescapable that the information provided by their clues was woefully inadequate. The next day, as a precaution, a careful examination of a long stretch of the coast was made from a boat, and this survey confirmed that the only feasible place where a heavy cargo could have been landed was near the mouth of the creek where they had beached the cutter the day before. On the theory that the wall of rock containing the cave entrance might in the course of time have become covered by a bank of earth, extensive clearances in the surrounding jungle were made and much digging done with the assistance of the ship's crew. But no cave was found, and it was eventually decided to abandon further excavation and to rest content with satisfying themselves that no other part of the island met the stipulated requirements. It was at this juncture that some encouragement was provided by the finding, in the depths of a river pool, of the broken arm of a silver cross, much battered and bent. Further search, however, revealed nothing more, apart from a relic of somewhat later date, in the guise of a sheet of corrugated iron.

It was now time to consider the question of return for, if the *Lytton* were not back at Salina Cruz by the end of the month, an additional £1,500 would at once become due to the owners. Had the treasure been found, this trifling addition to the bill would have been of no account but, as things were, there seemed to be no point in delaying their departure. They sailed on the 19th, calling at Wafer Bay, where they went ashore to be met by its bewhiskered owner, who offered them his invariable greeting:

'My name is Gissler. I suppose you have come to look for the treasure!'

It was learned that, a year or so earlier, the Gisslers had received another visit from Captain Hackett, this time aboard the *Blakeley*. He and his companions had arrived so short of food that they had deprived the island of its milk supply by slaughtering its small bovine population and, perhaps in part because of this and also, it would appear, in order to take issue with the Costa Rican authorities over their lavish granting of treasure-seeking permits, the Governor of Cocos and his wife returned to the mainland on board the *Lytton*.

In the course of making his representations, Gissler encountered Lord Fitzwilliam, who was himself bound for Cocos Island on a treasure-hunting expedition in his steam yacht *Veronica*. According to Paine, his lordship sided with Gissler in his dispute and not only exerted his considerable influence in his favour but gave him free passage back to the island. Beebe, however, whose *Arcturus* oceanographic expedition visited Cocos in 1925, throws a rather different light on the relationship between the two men. Ruth Rose, the Staff Historian of the *Arcturus* expedition, subsequently sought out Gissler in New York, where he was then living, and obtained much firsthand information from him about his long sojourn on the island. From this account it appears that Lord Fitzwilliam took it upon himself to begin extensive blasting operations in Chatham Bay without reference to the island's Governor, in the course of which somewhat carefree dynamiting, a large piece of rock landed on his Lordship's head. Moreover, in the midst of these activities, so S. Rogers<sup>114</sup> informs us, another expedition under Arnold Gray arrived on the scene, likewise armed with high explosive and what appeared to be an identical set of clues, for the newcomers set to work in dangerously close proximity to their rivals. Inevitably, fierce arguments arose, each side accusing the other of destroying its landmarks until, finally coming to blows, a pick-and-shovel battle developed!

In the years which followed, the island, with or without Gissler's sanction, was invaded by a steady stream of hopeful treasure seekers, one and all persuaded that they knew exactly where to look yet, without exception, destined to share the disappointment of their predecessors and, notable among these later arrivals, was the Malcolm Campbell<sup>21</sup> party, which reached Cocos on 27 February, 1926.

Captain (later Sir) Malcolm Campbell, the well-known racing motorist, was bitten by the treasure bug while on a trip to Madeira in 1924, though the treasure concerned was not that of Cocos, but another hoard, said to have been hidden on one of the Salvage Islands. At Madeira he chanced to meet an old friend, K. Lee Guinness, who had arrived there with his yacht, the *Adventuress*, and the upshot of a subsequent dinner together was a somewhat impetuous decision to begin a search for the treasure there and then. As it happened, bad weather prevented their making a landing on the island, and it was then arranged to return home and fit out a proper expedition. Enquiry later revealed, however, that the buried gold in question had already been recovered—by which time Campbell was sniffing at the scent of Cocos. . . .

The ensuing preparations included the commissioning of the construction of a metal-detecting instrument and, in order to test this new-fangled device, Campbell had deep pits dug all over his paddock, into which were flung lumps of old iron and, when the supply of this commodity ran out, sundry spare wheels and other valuable accessories from his garage, until in the end several hundred pounds worth of spare parts were safely hidden underground—where they remain to this day for, in the tests which followed, the metal-detecting apparatus failed to live up to its name!

Incredible though it may seem, at this time and, indeed, up to within three days of their sailing date, Campbell and his friends had no more to go on than various references to the treasure found in a number of books on the subject, plus the knowledge that numerous expeditions had already been to Cocos in a vain search for it! Then, at the last moment, Lee Guinness received a telephone call from someone in naval circles who had heard of their impending trip and, in this last-minute fashion, Campbell was put in touch with Commander Curzon Howe, son of the late Commodore Curzon Howe, with whom Nicholas Fitzgerald had corresponded.

One of Fitzgerald's letters, sent from Harbour Grace, Newfoundland, and dated 10 September, 1894, is quoted by Campbell

in full. It recounts the story of the Newfoundland's meeting with Keating in 1868, after they had both suffered shipwreck in Codroy Bay, and of the details he was given about the Cocos Island treasure, which information he offers to impart in return for one-twentieth of anything that may be recovered. The Commodore later received a map and a set of clues which, however, he did not follow up, and it was these papers which were now offered to Campbell.

Although, understandably enough, since the information was not his to divulge, Campbell does not describe the clues in detail, from what he does say it is clear that they merely reiterate the instructions sent to Admiral Palliser, for there are such familiar references as the high-water mark of a creek at the north-eastern end of the island (Chatham Bay), the need to strike off so many paces (seventy) in a certain direction (west-by-south), the making of a turn due north and the finding of a rock face containing a hole large enough to receive the end of an iron bar which, used as a lever, would open the door to the treasure cave.

The *Adventuress* duly anchored in Chatham Bay and, with his glasses, Campbell at once spied the creek. On landing, he made straight for it. Then followed the pantomime of stepping out the required number of paces and of turning to face north—from which vantage point the only bare rock in sight was some distance out to sea! At this, and despite Campbell's strenuous objections, his companions hastily concluded that the instructions must refer to Wafer Bay, to which the ship sailed the next morning, only to return to Chatham Bay that evening.

By this time Campbell alone retained any interest in the venture and, accompanied by two volunteer members of the crew, he elected to camp ashore. The next few days were spent in an exhausting search for the elusive rock-hewn cave, in pursuit of which all conceivable possibilities were considered. Was it intended that the stipulated number of paces should be made from the middle of the creek, or from one side? And had sufficient account been taken of the fact that allowance would need to be made for variations in compass readings? These and other questions opened up scores of alternative paths, all of which were methodically paced and tested and which led to many rocks, each carefully examined in its turn. But it was all to no purpose and, in expressing his conviction that the treasure nevertheless exists, Campbell concludes his account by saying that to be successful the searcher would need to be accompanied by a few friends of proved determination, aided

either by an able-bodied crew or by native workmen accustomed to the heat and have at his disposal suitable equipment, including an efficient metal-detecting device. Significantly, he says nothing about being possessed of any clues!

## IV

From the evidence that is available, such as it is, it seems to have been established that in all probability Keating did make one or more visits to Cocos, ostensibly in search of treasure and that, on his return to Newfoundland, he appeared to be possessed of considerable riches. Nor is there any reason to suppose that Nicholas Fitzgerald was other than sincere in his belief that the instructions bequeathed to him by Keating were genuine. From the fact that, in the hands of Palliser and others, this information nevertheless failed to reveal the hiding-place of the treasure, it must be supposed either that Fitzgerald misrecalled what was told to him or that he was misled by his informant. As to these possibilities, it is true that in a letter which he sent to Admiral Palliser on 23 May, 1898, Fitzgerald confessed that, although he believed that he had all the essential details well committed to memory, when he first came to set them in writing he discovered that he had forgotten the exact number of steps to be taken from the last bearing, though he was confident that it was seventy or one hundred and seventy paces. But, even allowing for this and for the fact that there are two bays and several creeks from which to choose, the number of alternatives does not become unduly large.

Can it be, then, that Fitzgerald was misled by Keating, whose own recollections might have become hazy in his old age? An indication that this may have been the case is provided by the fact that, whereas Fitzgerald was certain that the creek to be followed flowed into Chatham Bay, Keating's wife was no less firmly convinced that its waters ran into Wafer Bay—and Montmorency makes the point that confusion between the north-east and north-west bays of the island may well have existed in Keating's mind, arising from the circumstance that, while in Dutch maritime parlance, O stood for *Oest* or east, in Spanish-American terms, O was indicative of *Ouest* or west. But if some confusion of mind did exist, or if Fitzgerald was deliberately deceived, what reliance can be placed on the remainder of Keating's story, in particular upon the account he gave of his all-important meeting and conversations with Captain Thompson?

One answer to this question is given by the score or more de-

scriptions of the Thompson-Keating encounter and of the events prior and subsequent to it which have appeared in print since the beginning of the present century, no two of which are in complete agreement. Thus it appears that Thompson (or Thomson) was a passenger (or a member of the crew) on a vessel sailing to St. John's from England (or the West Indies) in 1844 (or 1838), when he became friendly with the ship's mate (or carpenter) whose name (by general consent) was Keating.

The number of journeys which Keating afterwards made to Cocos is likewise in dispute (according to one account, the second and last of these trips took place in 1848, whereas a third visit, so another authority informs us, occurred as early as 1846), while the name of the companion who accompanied him on his first expedition, supposedly made about 1844 in a brig called the *Edgecombe*, alternates between Boag, Boig and Bogue. As for Keating's evident uncertainty regarding the precise whereabouts of the hidden gold, the theory has been advanced that it was Boag who searched for, and found, the cave while his associate guarded the boat and that, with the death of Boag, Keating merely acquired some of the treasure which had been brought down to the beach. But this somewhat laboured explanation ignores the fact that it was Keating who supplied Boag with the details of the location of the cave in the first place, though Palliser's Swedish informant sought to overcome this objection by suggesting that Keating, as an ignorant seaman, was unable to read or write and that, in consequence, he was incapable of fully comprehending the instructions given to him by Thompson. Even so, he had but to show the relevant documents to Fitzgerald, as in these supposed circumstances he must have done to Boag. Again, the theory that Keating himself did not visit the cave introduces other complications, in that it reduces to mere hearsay the description he gave of the size and contents of the hiding-place, not to mention the highly suspect story of its possessing a revolving rock door, so cleanly cut and tight fitting as to be indiscernible when closed.

Much uncertainty also surrounds Thompson and his nefarious activities. In the accounts aforementioned his ship is variously referred to as the *Mary Dear*, the *Mary Dere*, the *Mary Dyer*, the *Mary Dier* and even as the *Mary Read*,\* while the threat which avowedly led to the panic-stricken evacuation of Lima's wealth

\* When asked to disclose the source of this somewhat discordant note, the amiable Gordon Cooper \*\* disarmingly replied (private communication, 10 April, 1959) that having penned his account, he had promptly—and permanently—dismissed it from mind!

is attributed by some to the advance on the city of the rebel leader, Simon Bolivar, in the early 1820s and by others to the war between Peru and Chile which flared up nearly two decades later.

Apart from the Haffner estimate, reports of the value of the treasure entrusted to Captain Thompson remain more or less constant at \$12,000,000 until 1933, when this sum was unobtrusively converted into £12,000,000 by Rogers, but more recently, no doubt after making due allowance for inflationary trends, Rolf Blomberg<sup>13</sup> has given its value as \$60,000,000. The stolen wealth is supposed to have consisted, in part, of 733 gold bricks, each measuring 4 inches by 3 inches by 2 inches, a solid gold, life-sized statue of the Madonna and 273 gold-hilted swords—eleven boat-loads in all. Exactly the same description, however, has been applied to Benito's loot, and there appears to be considerable uncertainty as to whether Thompson was captured in the company of the Portuguese pirate when the *Espiegle* finally caught up with the *Relampago*, or whether he was taken by Peruvian naval forces while on board the *Mary Dear*.

Details of the movements of the warship *Espiegle* during 1821, the year in which Benito's career ended, are not available at the Public Record Office. Nor does Lloyd's Register of Shipping contain a reference to the *Mary Dear*, though there is mention of a brig called the *Edgecombe*, built at Bristol in 1835 and registered at Liverpool. It was a vessel of this name, described as belonging to the Liverpool firm of Smith and Irvin (or Irwin), which, it will be remembered, is said to have carried Keating and Boag to Cocos. Records at Liverpool, however, admittedly far from complete, make no mention of a firm of this name, while the *Edgecombe*, registered at Lloyd's (in 1841), was owned by Ferris and Company. And although, interestingly enough, the ship's voyage was given as Liverpool to Newfoundland, her Master was not Gault, but C. Stagle.

Another possible source of information is referred to by Montmorency, who mentions that the national library at Lima contains records of the trial and execution of a number of mutineers, one of them a man named Thompson. However, he gives no details, merely remarking that the documents in question are available for inspection, the implication being that they have some bearing on the city's stolen treasure. As an alternative to learning the Spanish language and embarking on a journey to Peru, the present writer addressed a letter of enquiry to the Librarian at the *Palacio de la*

*Municipalidad*, from whom, however, the courtesy of a reply is still awaited.

In the meantime the confusion prevailing in the accounts that have been published during the past fifty years is all the while being increased by carelessness in quoting from primary sources. Rogers, for example, informs his readers that Palliser's 1903 expedition to Cocos consisted of four gentlemen who first met secretly at Mexico City, from which it would appear that he has mis-read Montmorency, who describes how four of the Adventurers, including Palliser and himself, travelled together in a French steamer to Mexico, where they met the three other members of the expedition, who had journeyed by a different route. Again, in making reference to Campbell's trip to the island, Wilkins gives the date of it as 1925, though Campbell himself, in a preface to the same book, says that his visit took place in 1926—a discrepancy which happily resolves itself, if it be accepted that of the two, Campbell is the more likely to be reliably informed. But what is to be made of the following extract from an account contributed by P. K. Devine (with the assistance of C. H. Hutchings, a grandson of Boag) to J. R. Smallwood's<sup>119</sup> well-known work on Newfoundland? The Captain immediately referred to is Boag:

*Arriving in Panama, the Captain, second mate (W. Boag Jr.) Keating and Gault went ashore to see the British Consul. A squall upset the boat, and they were thrown into the sea. Keating, Johnny Boag and Gault managed to right the boat and climb into her. Boag Sr. being a good swimmer, swam a mile to the land and to safety. The other three in the upturned boat were rescued by the first mate of the Edgecombe, who heard their cries and put off to the rescue from the ship in another boat. Captain Boag was drowned. He is said to have been pushed from the half-submerged boat by Keating and was devoured by sharks. . . .*

In other words (and ignoring the question of the identity of the hitherto unmentioned Johnny Boag), after swimming a mile to the Panamanian coast and to safety, Captain Boag was drowned!

All in all, the published accounts of Cocos Island and its buried hoards afford an outstanding example of how, in the course of time, the essentials of two or more unrelated narratives can give rise to a composite tale, the numerous versions of which eventually come to display so many contradictions and inconsistencies that the original facts, if not impossible to ascertain, at any rate successfully defy recognition as such. In these unhelpful circumstances there

remains another line of approach: an assessment of probabilities. Given, for instance, that up to the beginning of the 19th century South American coastal towns and shipping in the Pacific were constantly menaced by buccaneers who, on occasion, used Cocos as a hide-out, what is the likelihood of there being concealed loot on the island?

The popular and time-hallowed notion that spendthrift pirates, after the hardships and risks of a successful voyage, had nothing better to do with their plunder than to bury it on some remote and god-forsaken island, though it continues to be entertained by the romantically minded, is nevertheless open to the gravest of doubts. For one thing, after each profitable mission it was customary for the spoils to be divided among the ship's company, not collectively buried. And for another, the very nature of the freebooter's calling hardly encouraged the giving of much thought to the morrow, which might well find him with a knife at his throat, or a rope round his neck. All his inclinations, indeed, would favour the dissipation, rather than the secretion, of his share of the loot. But this is not to argue, absurdly, that no pirate crew ever had occasion to bury any plunder at all. On the contrary, it is possible to conceive of circumstances in which a hasty concealment might be dictated by events, such as the approach to their lair of one or more hostile ships. Again, it will be apparent that the *Mary Dear* incident in Callao Harbour, if true, provides a special case—a fugitive ship, loaded with stolen treasure, unable to put into port and in imminent danger of pursuit and capture. In such a plight, an early concealment of the evidence would be an obvious precaution—and where better to hide it than on Cocos?

Brian Fawcett, in a footnote to an account (which he edited) of the adventures of his father, Colonel P. H. Fawcett,<sup>47</sup> writes of hopeful treasure hunters having dug the island from end to end. But this, of course, is a mere figure of speech. Thanks to the dense and all but impenetrable vegetation which envelopes it, Cocos remains largely unexplored, and few visitors have wandered far from the neighbourhood of its two bays. Campbell gives a vivid account of the immense difficulties of hacking a way up the precipitous and overgrown slopes and, like others before him, he found the only feasible route inland to be along the course of the streams which cascade down the hillsides. But even here progress is slowed down by deep pools, outsize boulders and occasional waterfalls, not to mention the almost continuous rainfall, the tropical heat and the ever-present insects.

But the difficult conditions which now hinder the search for treasure must also have hampered those who were faced with the problem of concealing it, and it may be accepted that any hidden wealth, if it is not to be found in the numerous caves which honey-comb the coastal cliffs, must lie in the vicinity of one or other of the island's two anchorages. Voss, directed by Haffner's information to Wafer Bay, privately decided that an extensive sand spit he found there offered as likely a hiding-place as any, for it was firm and hard and was regularly submerged at high tide. This reasoning, it seemed to him, not only dispensed with the evident difficulties which any attempt to convey tons of gold into the interior would have entailed but it also served to explain the alleged failure on the part of Thompson's captors to find traces of disturbance among the vegetation, or of any other indication that a pit had been dug. Campbell, for his part, preferred to place his faith in the story of the man-made cave with the cunningly contrived door, though his unquestioning acceptance of this highly colourful detail forced him to embrace other improbabilities, designed, on the one hand, to account for the existence of so convenient a hiding-place and, on the other, to explain how Thompson came to know about it.

As might be expected, the hermit Gissler also entertained ideas on the subject. He informed Montmorency and his friends that he was satisfied that he had located the spot where some of the pirate loot—that attributed to Benito—had been concealed. He led one of his visitors to a nearby headland and pointed out some rusty eye-bolts, still fast in the rocks. On the strength of this evidence, it appeared, he had convinced himself that, after losing an anchor, the *Relampago* lay off the coast between Chatham and Wafer Bays, while members of the crew brought their valuable cargo ashore at high tide.\* The plunder was then hauled up the cliff face, conveyed to the top of a slope and, after being thrown into a crevice in the ground, was covered by earth and stones. However, the discoverer would not sanction any attempt at excavation unless those concerned were prepared to complete the task, which he estimated would require six months. At this time (1903), Gissler had been on the island no more than half of the twenty-odd years he was destined to spend there and it is hard to credit the fact that if he really

\* According to Gissler, the approach was blocked at low water by coral reefs. Perhaps an indication of the worth of his thesis is to be found in a statement made by L. J. Chubb in his *Geology of Galapagos, Cocos, and Easter Islands* (1933):

*There are no coral reefs around Cocos Island.*

believed that he had found the place where some of the treasure was hidden, he subsequently made no effort to recover it.

The claims of others to possess a knowledge of the treasure's whereabouts would appear to be no less unfounded. It is at all events a curious coincidence that three of the claimants—Keating, Flower and Haffner—were all prevented, for one reason or another, from bringing away more than a fraction of their find; that, without exception, they did not afterwards retrieve the remainder of the hoard; and that each of them provided detailed instructions which have consistently failed to lead any of their hopeful successors to the hidden gold. As for the explanations which have been offered by would-be finders to account for their long-continued lack of success, these have ranged from landslides and the effects of indiscriminate excavating to the disappearance of landmarks and (though this last surely cannot apply to Gissler) an insufficiency of time devoted to the search. In short, failure to locate the treasure has been attributed to every conceivable cause except one: that it may not be there to be found.

## CHAPTER FIVE

### THE DEAD AND THE BURIED

*Proposition: That in the Theban Necropolis and elsewhere in Egypt, the treasure-filled tombs of not a few Pharaohs await discovery still.*

#### I

TREASURE SEEKERS have at no time shown much respect for the dead; and in the past any rich potentate foolish enough to take his gold with him to the grave has had little prospect of remaining undisturbed for long, even though he may have planned to defeat the plunderer by resorting to a multiple burial, or by building a secret tomb, or by endowing his place of burial with labyrinthine passages and hidden rooms. At all events, few such devices appear to have served their intended purpose, as the melancholy sight of countless despoiled and empty sepulchres throughout the kingdoms of the ancient world now proclaims; and nowhere is this failure more in evidence than along the banks of the Nile, where the tomb-robber has been continuously at work for more than 5,000 years.

In Egypt, as elsewhere, the custom of burying food and weapons with the dead presumably had its beginnings in the expectation that the deceased would find himself in need of nourishment and protection during his long and hazardous journey from this world to the next. At first, the equipment provided for use *post mortem* was limited to items of a strictly practical nature. But, as the material culture of the people advanced, the burials of leading citizens acquired a magnificence which culminated in the palatial tombs of kings and queens who were laid to rest surrounded by a nation's ransom in gold, silver and jewels\*—by which time, however, the interest of the plunderer had long since been aroused.

Prior to Napoleon's descent upon Alexandria at the close of the

\* Modern treasure seekers will be disappointed to learn that precious stones such as the diamond, the sapphire and the ruby were unknown to the ancient Egyptians, and even their introduction to the pearl does not appear to have occurred until the Ptolemaic period. In the meantime, the stones, semi-precious and not so precious, which were used in the manufacture of jewellery, were chosen for their colour—lapis lazuli, carnelian, turquoise, green feldspar, red jasper and the like.

18th century, students of ancient Egyptian history had to rely for the most part on the works of Greek and Roman writers who had visited the land of the Nile in pre-Moslem times. The most famous of these accounts, none of which antedated the 5th century B.C., was that of Herodotus,<sup>110</sup> in whose day Egypt was a part of the Persian Empire. Among other things, the Greek historian expressed curiosity about the length of the native Egyptian royal line and was informed by the priests that upwards of 350 kings had occupied the throne of the Kingdom since its unification.

Details of this long sequence of monarchs was subsequently provided by Manetho, an Egyptian scribe who compiled a history of his country at the command, it is said, of Ptolemy II Philadelphus, one of the successors of Alexander the Great, who wrested Egypt from the Persian grasp in 332 B.C. In deference to his royal patron, Manetho wrote in Greek, and the completed work was placed in the Library of Alexandria, only to be lost when that famed institution was wantonly destroyed in later years. Extracts from the missing treatise were preserved for posterity, however, by the labours of copyists and, from these excerpts, it is known that Manetho divided the Egyptian Pharaohs (as they came to be called) into thirty dynasties or royal houses, each of which was distinguished by a geographic epithet indicative of its place of origin—the Thinite Dynasty (of Thinis); the Memphite Dynasty (of Memphis); the Theban Dynasty (of Thebes); and so on. Moreover, in confirmation of what Herodotus had reported, it appeared that some 330 kings had occupied the throne since the two rival Kingdoms of upper and lower Egypt had been united by Menes (*alias* Narmer), the first of the dynastic rulers.

Who were these kings? For how many years had each of them reigned? And where had they been buried? Thanks in no small measure to the work of those scholars and decipherers who, from the time of Thomas Young and J. F. Champollion onwards, made possible an understanding of the hitherto mysterious hieroglyphs, reliable answers to these and a host of other questions were provided by the archaeologists who followed in the wake of the Napoleonic invasion of Egypt. The excavators, that is to say, explored the temples and tombs and the philologists read any inscriptions which were found on ceilings and walls, thus identifying builders and owners.

From these and other sources, a reasonably satisfactory historical framework was gradually pieced together. Whereas Hero-

dous, by allowing a period of 100 years for every three generations, reached the conclusion that the royal line of Egypt extended back almost to 12,000 B.C., modern investigators have been able to ascribe a much more probable date to the shadowy Menes. Champollion advocated 5867 B.C., Auguste Mariette 5004 B.C. and Flinders Petrie 4777 B.C.—successive reductions which reflected a steady increase in knowledge. The process has continued; and to-day it is generally accepted that the all-important introductory date is about 3200 B.C., an estimation which has been confirmed by tests using the newly devised radio-carbon technique.

Accepting Manetho's dynastic arrangement and given the year 3200 B.C. as the probable start of it, the subsequent course of events may be summed up thus: An Archaic Period (Dynasties I-II) gave rise to the Old Kingdom (Dynasties III-VI) which terminated in a series of disorders covered by the First Intermediate Period (Dynasties VII-X); there then emerged the Middle Kingdom (Dynasties XI-XII), a restorative epoch which was followed by a Second Intermediate Period (Dynasties XIII-XVII), in the course of which the power of the central authority waned to such an extent that the Delta region was overrun by Semitic nomads, who established a series of Pharaohs of their own (the Hyksos Kings); subsequently, with the eventual expulsion of these invaders, there flourished the New Empire (Dynasties XVIII-XX), an era of prosperity and expansion which came to an end with the Late Dynastic Period (Dynasties XXI-XXX), an age of decline marked in turn by Libyan incursions, Nubian overlordship, Assyrian conquest and Persian enslavement, which last state of servitude was terminated by Alexander's conquest of Egypt. There then followed the Macedonian or 31st Dynasty of the Ptolemies, which heralded the advent of the Romans in 30 B.C.

Once again assisted by Manetho, and with the added help of sundry other king lists, it has been possible to identify many individual members of the various dynasties and also to establish the names of the cities in which these monarchs reigned and so locate the royal burial grounds to which they were consigned when they died. Thus the original capital of Menes and his immediate successors was Thinis, in Upper Egypt, with nearby Abydos as a favoured place of burial. But in his campaign against Lower Egypt, Menes used Memphis as a base and, by the beginning of the Old Kingdom, this strategically placed northern town had become the seat of government, with Sakkara and its environs as the site of the royal necropolis. No doubt for reasons of state, several of the

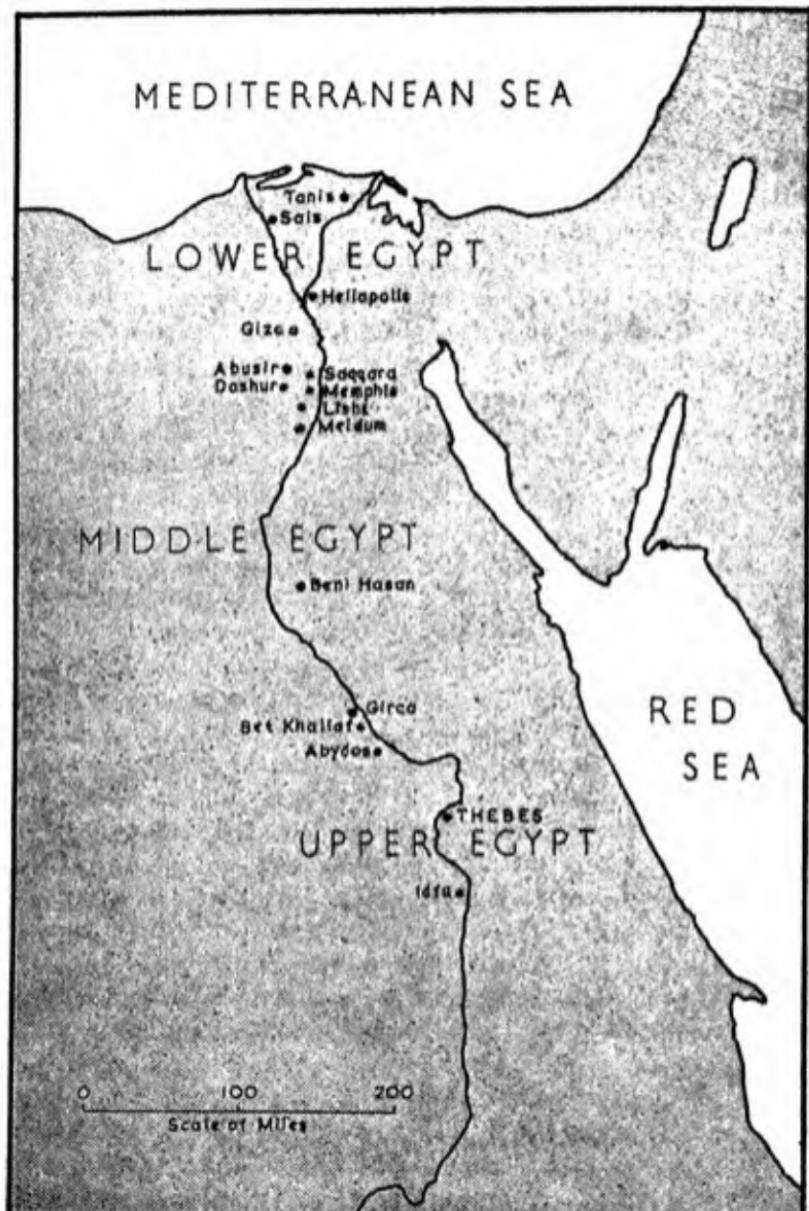


FIG. 4. The Nile Valley and the location of the main dynastic centres and adjacent burial places of the Pharaohs. The Royal Necropolis at Thebes is situated on the left (western) bank of the river. (See Fig. 5, p. 123.)

early monarchs prepared tombs for themselves in both localities and, in consequence, their actual place of burial remains a matter of conjecture, since most of the contents of these ancient buildings, including the royal remains, have long since disappeared.

The first of the dynastic tombs were relatively simple affairs, no more than open pits lined with mud-brick, often possessed of a timber roof and appearing above ground as rectangular, flat-topped structures which modern Arabs refer to as *mastabas*, because of their likeness to a bench. But in time, the size and splendour of the royal tombs greatly increased, until by the end of the 2nd Dynasty their length had grown to as much as 280 feet, while a long descending stair led to a central chamber lined with stone and surrounded by more than half a hundred rooms.

It was at this juncture that there occurred a striking change in design which coincided with the accession of Zoser, one of the first of the old Kingdom rulers. At the hands of his architect, Imhotep, the royal tomb, though it began as a conventional *mastaba*, later underwent a succession of alterations and extensions, until it finally assumed the form of a series of *mastabas*, decreasing in size and mounted one on top of another, thus giving rise to the famous Step Pyramid—the world's first large-stone monument.

Zoser's example was followed by his successors, by whom the true pyramid was soon developed. Snefru, of the 4th Dynasty, contributed to the process by erecting two outsize structures not far from Memphis (one at Dashûr and the other at Meydûm), a feat which inspired his son Khufu (the Cheops of the Greeks) to select a site somewhat lower down the Nile at Giza, where he built what was to remain the largest pyramid of all. This, the Great Pyramid, was originally 481 feet high and its base covers an area of 13 acres. It has been estimated that it contains more than two and a quarter million limestone blocks, each weighing about  $2\frac{1}{2}$  tons and, according to the information given to Herodotus, 100,000 men laboured for ten years merely to make a roadway to the site, while the structure itself was twenty years in the building.

Admittance to the tomb was gained by way of an opening on the north face, a location dictated, according to H. Frankfort,<sup>53</sup> by the theological notions of the time, which held that the dead king was destined to join the sun god, Ra, in the guise of one of the circumpolar stars, and thus required ready access to the northern part of the sky. The opening, placed some 50 feet above ground, continued as a narrow passage running downwards at an angle for more than 300 feet and terminating in a chamber hewn in the solid

rock. This, it would appear, was originally the intended burial place. But as the building of the pyramid progressed, an ascending gallery was formed, leading from the roof of the lower passage to two rooms built in the heart of the structure.

What caused this change of plan? There is evidence which suggests that the rich tomb of Queen Hetepheres, the mother of Khufu, had been blatantly violated during her son's reign and that the outraged monarch ordered a hurried reburial in the vicinity of his own tomb, unaware (the dire tidings having been withheld from him) that the corpse of the Queen had been destroyed by the robbers. At all events, in 1925, after twenty years of patient excavation in the neighbourhood of Giza, members of the Harvard-Boston Expedition discovered a rectangular cutting, packed with limestone blocks, below the surface of a street in the ancient necropolis. The work of clearing the shaft went on for a month, until finally, at a depth of 85 feet, an intact wall of masonry was found. Sections of this were removed to reveal a burial chamber containing a sealed sarcophagus, surrounded by the disintegrated remnants of what had once been a gorgeous array of funerary furniture. Much of this equipment, carefully rebuilt, is now on view in the Cairo Museum. So, too, is the Queen's great alabaster sarcophagus—found to be empty when it was opened by the discoverers.

But if Khufu supposed that any plunderers who somehow managed to discover the hidden entrance to his tomb would merely follow the descending passage to the rock hewn chamber below and miss finding the gallery overhead, the end of which was sealed with a massive granite plug, these hopes were not destined to be realised. The tomb was undoubtedly ransacked at a very early date, for in Roman times the whereabouts of the concealed entrance was common knowledge, as is clear from the account which Strabo<sup>65</sup> gives.\* Subsequently, however, and prior to the Arab conquest of Egypt in the 7th century, the secret was lost and, in A.D. 818, Mamun the Great, his greed aroused by tales of the vast treasure which the building contained, laboriously tunnelled into the stonework of the west face. He appears to have been assisted in this endeavour by the fact that earlier despoilers, on detecting the granite plug which blocked the ascending passage, had avoided this obstacle by cutting through the much softer limestone which surrounded it. At all events, in the course of their constant

\* In a reference to the Great Pyramid, the Greek geographer states:

*At a moderate height in one of the sides is a stone, which may be taken out: when it is removed, there is an oblique passage (leading) to the tomb.*

battering, Mamun's men seemingly disturbed the loosed block of granite, which crashed with a resounding thud. Thus encouraged, and guided by the direction from which the thunderous noise within had come, the tunnellers at last encountered the entrance passage, only to find that the burial chamber had been looted long before their arrival.

The Second of Giza's three great pyramids, that of Khefren, is slightly smaller than the Khufu edifice and its internal arrangements are less complicated. Inexplicably enough, however, it was provided with two entrances (thereby doubling the risk of unwarranted intrusion), both of which are located on the north side. An elevated opening, to be found at no great distance up the face of the pyramid, leads by way of a descending passage to a horizontal corridor, blocked by a portcullis slab held in vertical grooves. Beyond this lies the tomb chamber, with a great granite sarcophagus sunk in the floor to the level of its lid. The lower entrance is located in a paved area surrounding the pyramid, and from it a passage first descends and then levels out. After passing a seemingly unused chamber cut in the rock, the passage slopes upwards and so continues until it meets the horizontal section of the upper corridor.

An entrance was forced in modern times by G. B. Belzoni,<sup>10</sup> whose colourful description of the break-in affords an instructive glimpse of the tomb-robber at work. Ignoring Herodotus (who asserted that the building contained no subterranean apartments), he gave his attention to the south and west faces of the pyramid, closely scrutinising the stone work for some sign of a way into the interior. Finding none, he then came to the north side, and some instinct led him to make a start there. He accordingly set a gang of Arab labourers to clearing away the sand which covered the lower part of the monument, and at length their digging brought to light an opening which had been made in the stonework by earlier vandals. Had these intruders succeeded in gaining access to the tomb chamber? Belzoni could not be sure for, after the occurrence of an accident which might easily have caused the death of one of his men, he reluctantly came to the conclusion that the danger from falling blocks of stone was too great to be risked.

Belzoni's next move was to examine the arrangement of the passages in the Khufu pyramid, in the hope that this might provide him with a clue. Then he ordered his men to make a fresh start and soon had the satisfaction of learning that he had guessed aright, for it was not long before the entrance to a descending passage was

encountered. This was followed until progress was halted by a granite slab. It proved to be some 15 inches thick and, in the confined space of the tunnel, which was a mere 4 feet in height and even less in width, raising this obstacle was no easy matter. Even with the aid of improvised levers, it required the strength of several men to lift it, in which manner it was inched up in its twin grooves until at last Belzoni was able to pass through the opening. But when he reached the burial chamber beyond it was at once evident that he had indeed been anticipated in his visit and that other intruders who had entered the tomb before him had also been disappointed. The sunken sarcophagus was empty, except for some rubbish and a few bones (those of the Pharaoh, thought Belzoni; those of a bull, later reported the authorities in London!) while, on the western wall of the chamber was scrawled a message in Arabic. As translated by one A. Salame, it read:

*The Master Mohammed Ahmed, lapicide, has opened them: and the Master Othman attended this (opening) and the King Ali Mohammed at first (from the beginning) to the closing up.*

The third pyramid of the Giza group, that of Menkeure, was likewise found to have been robbed in antiquity when it was entered by Howard Vyse in 1837. In size, this structure is less ambitious than its two companions, a tendency increasingly displayed by the numerous pyramids erected by later monarchs of the Old Kingdom, some of whose tombs were so relatively small that they have scarcely survived the various assaults that have been made upon them. All were despoiled long ago—if not soon after their erection, then almost certainly during the troubled years of the First Intermediate Period, when a state of near-anarchy prevailed throughout the land and the nomes (provinces) for a time became autonomous.

## II

This pattern of events—the emergence of a strong line of kings whose rich tombs suffered despoliation whenever the power of the central authority began to decline—was several times repeated in the centuries which followed. And although pyramid building continued to engage the attention of the Pharaohs of the Middle Kingdom, several of these monarchs sought to escape the fate of their Old Kingdom predecessors by resorting to novel expedients. Amenhemet III, of the 12th Dynasty, was one of those who abandoned the traditional northern entrance when he constructed

his pyramid at Hawâra, for he transferred the hidden opening to the south side. He also went to great lengths to ensure the bafflement of any plunderers, should they nevertheless succeed in gaining admittance, by arranging that, after descending a long stairway, they should find themselves in a false burial chamber. From this room, a movable panel in the ceiling hid from view two passages at right angles, one of them filled with loose blocks. The filling, however, was a blind, designed to attract the attention of any intruders. The actual way was along the second and open passage, though this seemingly led to a dead-end. But here again, a sliding panel gave access to a further room with yet another secret panel which, on being moved, disclosed a passageway, progress along which was obstructed by two deep wells, while beyond these pits was another filling of masonry. The burial chamber, however, did not lie in this direction, but was approached by way of a hidden cross trench in the passage floor. This cutting led, not to a door, but to an opening so contrived that it could be blocked by letting drop a 45-ton block of stone.

All these precautions, however, had been devised and put into operation to no purpose. When Flinders Petrie<sup>105</sup> entered the pyramid in 1888 and set about investigating its mysteries he had little difficulty in following the trail of destruction left by the tomb robbers of long ago. One by one the hidden panels had been discovered and thrust aside, and not even that final bar to progress, the formidable block of stone, had deterred the plunderers. Refusing to admit defeat, they had laboriously tunnelled a way through it! Needless to add, little was found by Petrie in the funeral chamber beyond, apart from a massive sarcophagus. The royal body, highly inflammable in its mummified state, had been set on fire and destroyed, as had the remains of the Pharaoh's daughter, Ptah-nefru, who had evidently died during her father's lifetime and been buried in his tomb.

No doubt this and many another act of vandalism were committed during the Second Intermediate Period which came after the collapse of the Middle Kingdom. It was a time of usurpation and of foreign domination, and it remained for Sequenenre, a Prince of Thebes, to take up the struggle which eventually led to the expulsion of the Hyksos invaders by his son, Amose. Manetho begins his 18th Dynasty with this Amose, under whose successors Thebes, not for the first time in its history the home of Egypt's rulers, became firmly established as the foremost city in the land. Here, for nearly 500 years, three dynasties of New Empire kings

lived in unparalleled splendour on the eastern side of the Nile and were laid to rest in the midst of incredible riches in a secluded and hitherto unused part of the necropolis which had for long been established on the river's western bank.

In the course of time this so-called 'City of the Dead' had become very much alive. Self-contained villages grew up there, built to house the numerous workers employed in the constructing and furnishing of temples and tombs—masons, painters, carpenters and embalmers among them, together with armed guards and members of the priesthood. There thus arose a thriving community made up of clergy, troops and artisans, governed by a specially appointed official known as the 'Prince of the West and general of the soldiers of the Necropolis' who was responsible for the maintenance of law and order and whose duty it was to keep a careful watch over the many rich tombs entrusted to his care.

In times when the Pharaoh was resolute and his administration strong, the system worked well enough, though the need for additional precautions was early recognised. To this end, Amenophis I, the successor of Amose, made what amounted to a revolutionary change in the traditional burial procedure. As a result of the troubled times through which the country had recently passed, the probability is that hardly a tomb of any note had escaped violation, a mournful and disturbing fact which cannot have escaped the notice of the new Pharaoh. Such wholesale robbing of the royal dead was of itself alarming and distressing enough, but of even greater concern was the frequent destruction of the mummified remains of the deceased which also took place, as this, it was believed, was bound to have serious repercussions on the spiritual welfare of the hapless victim.

How, then, could the safety of the royal remains be ensured? The mountains of stone erected over their bodies by Khufu and his companions had availed them nothing, while the maze of passages and secret rooms on which Amenhemet and others had relied had also failed in their purpose. It was clear that such outside tombs, undisguised and undisguisable, were an open invitation to the plunderer in lawless times. Moreover, even if the sepulchre were itself hidden, its existence would be revealed by the funeral temple which, in accord with long-established practice, invariably accompanied it—the theory being that this close association of tomb and temple was necessary in order to enable the *ka* or spirit of the occupant of the one to have ready access to the premises of the other. But was this, after all, so vitally

important? Amenophis appears to have decided that it was not for, as the lesser of two evils, he took the drastic course of subjecting his *ka* to considerable inconvenience by separating the two buildings.

Tuthmose I, the next monarch, carried the process to its logical conclusion. Previously (11th—17th Dynasties) the tombs and associated structures of the kings and nobles of Thebes had been built on a plain fronting the line of high cliffs facing the Nile, and it was here, in the customary location, that the funerary temple of Tuthmose was erected. For his place of burial, however, he selected a desolate spot in a secluded gorge which lay hidden behind these cliffs, approached by a long and circuitous route through a distant cleft in the hills. Here, in this dried-up wady of the Libyan Plateau, the architect Ineni (as his own tomb inscription informs us) supervised the construction of the royal sepulchre, 'no one seeing, no one hearing'. It was a modest enough place, as indeed it was intended to be—merely a gallery, driven into the limestone cliffs, with an insignificant entrance which, by way of a flight of steps, led to a square room, from which another stairway descended to a roughly hewn burial chamber. Thus was inaugurated the famed Biban el-Muluk, otherwise known as the Valley of the Tombs of the Kings.

The daughter of Tuthmose, the famous Queen Hatshepsut, who throughout her lifetime was the real ruler of Egypt during the reigns of Tuthmose II and III, was also provided with a well-hidden tomb, the entrance to which was located in an inaccessible position high up a precipitous cliff face above the Valley where her father lay buried. Her funerary temple, however, the stupendous edifice miscalled Deir el-Bahri, stood at the foot of the cliffs which overlooked the river and, after (or during) its construction, the Queen appears to have conceived the ingenious idea of tunnelling into the mountain from a point in the hidden Valley opposite her temple, that her sepulchre might be placed immediately below it. The two buildings, in so far as her *ka* was concerned, would then be within easy, but thief-proof, reach of one another.

The cliff face tomb was accordingly abandoned and from within the Valley a long, descending passageway was excavated, 700 feet in extent and terminating in a series of chambers more than 300 feet below the level of the entrance. But unfortunately for the Queen's intention, bad rock was encountered in the early stages of the work and, instead of following a straight course, the corridor perforce curved markedly to the right, so that eventually it came to

an end, heading in a direction the opposite to that which had been planned.

The presence of the masterful Hatshepsut in the so-called Valley of the Kings encouraged the making of other non-Pharaonic intrusions. Tausret, who was also a Queen in her own right, followed her example, and Queen Tiy, the favourite consort of Amenophis III, was likewise buried there. Several Princes (at least one of whom was accompanied by his wife), not to mention a number of high officials, among them the Vizier Userhet and the Chancellor Bay, were accorded the same honour though, in due course, a burial ground reserved for Queens (and Princes), the Biban el-Harim, was established in another, if somewhat less inaccessible, enclosed valley in the Theban hills.

In the Biban el-Muluk, meanwhile, one Pharaoh after another prepared himself what he fondly hoped would be a final resting place, until more than half a hundred tombs were clustered there and the congestion was such that the overflow had to be accommodated in a western branch of the main valley, the Gabbanet el-Qurud (Cemetery of the Apes), so called by the Arabs because of some wall paintings to be seen there in the tomb of the Pharaoh Ay.

In the interests of privacy, the entrances to the early tombs had been made as inconspicuous as possible. The growing popularity of the Valley, however, made secrecy increasingly difficult to maintain, and eventually all attempts to conceal the fact that a royal burial place existed there were abandoned. Some monarchs then resorted to hidden rooms and passages, but for their chief protection they continued to rely upon the alertness and loyalty of the priestly attendants and the armed guards.

A warning of what was liable to happen was given as early as the end of the 18th Dynasty, not long after the abortive attempt made by Amenophis IV (Akhnaton) to impose a monotheistic worship of the sun god Aton on the country. After the death of the would-be reformer, his place was taken briefly and in turn by two of his sons-in-law, the second of whom was called Tutankhamen. How premature was the decease of this youthful monarch is shown by the fact that the tomb being prepared for him in the Western Valley was far from ready when he died. In this emergency the high priest Ay, who had been granted the privilege of constructing a burial place for himself in the main Valley, obligingly exchanged tombs with the dead ruler, whose recently vacated throne he also proceeded to occupy. A period of unrest and intrigue followed, in the course of which Tutankhamen's tomb was entered by robbers. The

intruders, however, were disturbed at their work and fled before much damage had been done, so that when the entrance was resealed by the priests the tomb remained more or less intact.

There is also evidence that the sepulchre of Tuthmose IV was attacked about this time, for the general Haremhab, who succeeded Ay, found it necessary to issue instructions to renew the burial of that monarch. But these violations were seemingly of a sporadic nature, and the systematic plundering of the Valley's royal dead had to await the appearance on the throne of those ineffectual members of the Ramesside line (Ramses IV-XI) who brought the 20th Dynasty to its inglorious close.

It was during the reign of Ramses IX that several tombs on the plain bordering the riverside cliffs were found to have been entered and robbed, and it so happens that official reports concerning the apprehension and trial of those responsible for the outrage have survived. From these documents (the Abbott, Amherst and Mayer papyri) it appears that a state of rivalry existed between Pesiur, the Prince of No (Thebes),\* and Pewero, the Prince of the West (the Necropolis). Acting upon reports brought to him by his agents, the Prince of No announced that, thanks to the incompetence of the Prince of the West, certain of the royal tombs in his care had been attacked and robbed. Pewero at once responded to this serious imputation by setting up a commission of inspection, charged with the task of examining the various royal cemeteries, including the Valley of the Kings. One outcome was the discovery that the pyramid tomb of the 13th Dynasty Pharaoh Sebekemsaf had been plundered, and the robbery was eventually traced to eight men, one of those implicated being the boatman of the self-righteous Prince of No!

The other seven, however, proved to be artisans—the water-bearer Kaemwese, the mason Hapio, the field-labourer Amenemhab, the carpenters Setekhnakht and Irenamun and the quarrymen Haspwer and Amenpnufer. It was the last-named, Amenpnufer the son of Anhernakht, who, after confessing that the pyramid had been entered by tunnelling into it from another tomb nearby, described how:

*We found this noble mummy of this king equipped like a warrior. A large number of sacred-eye amulets and ornaments of gold was at*

\* The Egyptian name for Thebes was *Weset*, though it was also referred to as *Newt* (the City), from which was derived the Hebraic *No* of Ezekiel and the *No Amon* (City of Amon) of the prophet Nahum. The origin of the Greek *Thebia* is uncertain.

*his neck, and his headpiece of gold was on him. The noble mummy of this king was all covered with gold, and his inner coffins were bedizened with gold and silver inside and outside with inlays of all kinds of precious stones.*

No doubt the punishment meted out to the culprits was severe but, whatever their fate, it did little to deter others. Within the next three years the tombs of Seti I and Ramses II were plundered, an ominous indication that the emboldened thieves had once more turned their attention to the royal Valley. One of Seti's Queens was the next victim, after which no less than four days were spent in breaking into the tomb of Amenophis III—ample evidence of the complicity of some of the guards. Thereafter, there was no stopping the attackers, and the Necropolis priests, in a vain attempt to ensure the safety of their royal charges, resorted to moving the mummified remains from one temporary hideout to another. But the looting went on throughout the 21st Dynasty, until finally the much-handled corpses were gathered together in a last desperate effort to place them beyond the reach of the thieves. About a dozen of the more damaged bodies were walled up in a side chamber of the tomb of Amenophis II, while forty or more other specimens, including the bodiless head of Seti I, were unceremoniously dumped in an isolated and abandoned tomb shaft in the vicinity of Deir el-Bahri.

In the event the ruse succeeded, for these hiding-places remained undiscovered until long after all those who shared the secret of their existence were themselves dead and forgotten. It was, in fact, not until some 3,000 years later that the two caches were accidentally found by modern descendants of the ancient tomb robbers, and the furtive attempt of these gentry to dispose of some of the contents soon led to their undoing.

The abandonment of the ransacked Valley of the Tombs, meanwhile, had been preceded by a decline in the importance of Thebes itself, a process which was hastened in its later stages by the Assyrian Ashurbanipal's sacking of the city during the 25th (Ethiopian) Dynasty. The final blow came in 29 B.C., in which year the Romans responded to an attempted revolt of the inhabitants against excessive taxation by laying waste the entire city. So complete was the devastation that, when Strabo visited the site a few years afterwards, the only signs of life left in the once mighty capital of the Egyptian Empire were to be found in a few scattered villages, located in various parts of the extensive ruins.

## III

Attempts in modern times to find some of the treasures of the Pharaohs, which the robbers of old might have overlooked or missed, may be said to date from the start of the 19th century. Prior to this, although not a few venturesome European travellers had visited Egypt, they had found the country in such a lawless state that any attempt to stray far from Cairo and other main centres was attended by considerable danger. In 1738 N. L. Norden was chased from the ruins of Thebes by resident bandits, though a year earlier the intrepid Richard Pococke had inspected the temple of Deir el-Bahri and had even ventured into the forbidding Valley of the Tombs of the Kings, to the evident concern and alarm of his Arab guide. That there was good reason for this trepidation was later confirmed by James Bruce, famed for his exploration of Abyssinia. In the course of investigating the rifled sepulchre of Ramses III, he found that other of the tombs were occupied by natives who showed unmistakable signs of resenting his intrusion and it remained for the troops of Napoleon to clear the area and make it safe for subsequent excavators.

The short-lived French invasion of Egypt served to open up the country to numbers of foreign adventurers who flocked there in the hope of making their fortune. Among them was an Italian horse dealer, Giuseppe Passalacqua, and his fellow countryman, G. B. Belzoni, a one-time strong man in a circus who, while touring in England, had conceived the idea of persuading Mohammed Ali, the newly arisen master of Egypt, to invest in a hydraulic machine. But on arrival, both men found trafficking in relics and searching for hidden treasure a much more profitable undertaking and others, who early joined in the hunt, were Bernardino Drovetti, who had landed with the French forces, and Henry Salt, the recently appointed British Consul General.

Though it was not fully realised at this time, a number of considerations pointed to the Valley of the Kings as the one place where a rich and undisturbed royal burial might possibly be found. For one thing, this part of the Theban Necropolis had been established, comparatively speaking, as recently as the 18th Dynasty. And for another, some attempt had been made, at any rate at the onset, to achieve complete concealment of the graves. As for the value of the contents of the tombs, this would naturally reflect the affluence or otherwise of the times—and it so happened that the period of the New Empire was one of great prosperity for Egypt.

Quite apart from the mining operations undertaken by the Egyptians themselves, particularly in the eastern desert near the Sudan frontier, where rich auriferous veins were to be found running through the quartz rock, enormous quantities of precious metal were delivered to them as tribute by defeated enemies. Thanks to the conquests of Tuthmose III in Syria and elsewhere, a seemingly endless stream of booty poured into Thebes—the records show that a typical consignment of gold weighed 4 tons! —until the accumulated wealth of the capital city attained such vast proportions that the fame of it reached the author of the *Iliad*:

*Where, in Egyptian Thebes, the heaps of precious ingots gleam...*

Belzoni, for one, early gave his attention to the royal Valley, where he investigated more than a dozen tombs, including those of Ay, Ramses I and Prince Mentu-hir-khopshef. He also had the good fortune to rediscover the burial place of Seti I, the location of which, though well known in Greek times, had since been forgotten and lost, its entrance hidden by fallen debris. The removal of this rubble revealed an opening through which Belzoni squeezed, to find himself faced by a series of stairways and passages, the walls and ceilings of which were lavishly adorned with sacred inscriptions and scenes of ritualistic import. He was eventually brought to a halt by a deep well in the floor, 14 feet across and twice as deep, at which point it had originally been made to appear that the tomb ended. A gaping hole in a painting on the wall opposite, however, informed Belzoni, not only that more passages lay ahead, but also that other intruders had already ascertained the fact.

The next day he bridged the pit and so entered a decorated hall, its roof supported by four pillars, beyond which was a second hall. This proved to be a dead-end, but the first room had contained a false wall on the left-hand side, through which the ancient robbers had broken. They thus gained access to two more flights of stairs, connected by corridors which led to a complex of underground chambers, one of them a large square room with six pillars, in which stood an empty alabaster sarcophagus. Underneath this receptacle a concealed opening led to yet another passage, which was followed for a further 300 feet until progress was blocked by a roof fall. And so it remains to this day. . . .

After this appraisal by Belzoni, a less mercenary interest in the

royal Valley was taken by a succession of savants, among them Gardner Wilkinson, who introduced the useful practice of numbering the tombs until, in 1844, members of the great Humboldt Expedition to Egypt, under Richard Lepsius, surveyed the whole area and partially cleared the sepulchres of Menepthah and Ramses II. This investigation confirmed that all the accessible tombs had been rifled in antiquity, and it was generally supposed that the possibilities of this section of the Theban Necropolis had been exhausted.

Subsequently, in a somewhat belated attempt to control the wholesale plundering of the ancient monuments which had been going on in all parts of Egypt during the past fifty years, Auguste Mariette was appointed head of a newly established Service of Antiquities, and one of his first acts was to decree that henceforth all unauthorised excavation must cease. It quickly became apparent, however, that though the ban was not too difficult to enforce where foreigners were concerned, it was virtually impossible to apply to those Egyptian nationals who were making a comfortable living by selling relics, not a few of them genuine, to an ever-growing army of interested visitors and collectors.

Matters reached a climax when various items of 21st Dynasty origin appeared on the market. There was no question of their being fakes, and it was clear to the authorities that an unofficial find of considerable importance had been made. Several years passed, however, before those concerned could be traced. Eventually, through the efforts of a government agent posing as a rich foreign buyer, an Arab by the name of Ahmed Abd-el-Rasul was trapped into making an illegal sale, whereupon he was promptly arrested. But when questioned, he loudly proclaimed his innocence and, despite methods of persuasion to which the scars on his feet long bore witness, in the end he had to be released for lack of evidence. Fortunately for the authorities, the thieves then quarrelled among themselves. To the victim of the interrogation it seemed only fair that his sufferings and his silence should entitle him to a larger share of the profits but, after a heated dispute with an influential partner in crime (a Consular Agent who subsequently claimed diplomatic immunity), Ahmed's brother Mohammed, decided that the time had come to make a bargain with the authorities.

So it came about that on 5 July, 1881, Emil Brugsch, representing the Service of Antiquities, was led to a lonely gulley in the vicinity of Deir el-Bahri. Here, at the foot of some cliffs, he was

shown the mouth of a square shaft, cut in the rock, which the two brothers had found several years earlier while engaged in some illicit digging operations. The shaft dropped almost vertically for forty feet, giving access to a chamber and to an even longer corridor, both of which were piled to the roof with an unprecedented accumulation of royal mummies, coffins and funerary equipment which had been rescued by the priests of 21st Dynasty times from the plundered tombs of the Valley of the Kings!

An echo of this outstanding archaeological find came in 1898, when Victor Loret, acting on information received, searched for and found the tomb of Amenophis II. Inevitably, it had been robbed. But unexpectedly, it contained both the sarcophagus and the mummy of the dead king—a find unique at that time.\* And more unexpectedly still, examination of the tomb brought to light a hidden side chamber containing more than a dozen other royal bodies, all of which, like those of the Deir el-Bahri hoard, had remained safely concealed down through the centuries.

This unexpected discovery of yet another tomb in the supposedly depleted Valley of the Kings raised the question of whether still other burial places remained to be found and, in the following year, a careful search made by Loret disclosed three more rifled sepulchres, respectively those of Tuthmose I, Tuthmose III and the Standard Bearer Maherpra. At this, Theodore M. Davis, a wealthy American, came to an arrangement with the Service of Antiquities whereby he would provide the funds necessary to enable a further search to be made. As a result of this collaboration, between 1903 and 1909 more than a dozen inscribed and uninscribed tombs, hitherto unknown, were brought to light, including those of Tuthmose IV, Spitah, Haremhab, and Yuya and Thuya, the parents of the favourite wife of Amenophis III. This last, though not the tomb of a Pharaoh, was unique in that it contained the mummified remains of its owners, together with a quantity of rich funerary furniture which had been ignored by the thief or thieves who had long ago entered the place.

But the most far-reaching of the Davis finds, though it was not

\* It was decided to leave Amenophis reposing in his tomb but, although guards were stationed at the entrance, the experiment was not a success. The representatives of law and order, so they claimed, were attacked by armed men who entered the tomb, slashed the wrappings of the king's body in a search for jewels and made off with an item of funerary furniture. In the investigation of the affair which followed, a careful examination of a set of footprints, left on the floor of the tomb, revealed a remarkable resemblance to those of a certain Mohammed Abd-el-Rasul, though neither his participation in the escapade nor the suspected complicity of the guards was ever proved.

realised at the time, was the unearthing of a small burial pit containing linen wrappings and mortuary offerings, packed in baked clay jars. Even when Herbert Winlock, of the New York Metropolitan Museum, noticed seals on the jar lids which bore the name 'Tutankhamen', the full implication of the find escaped the dis-

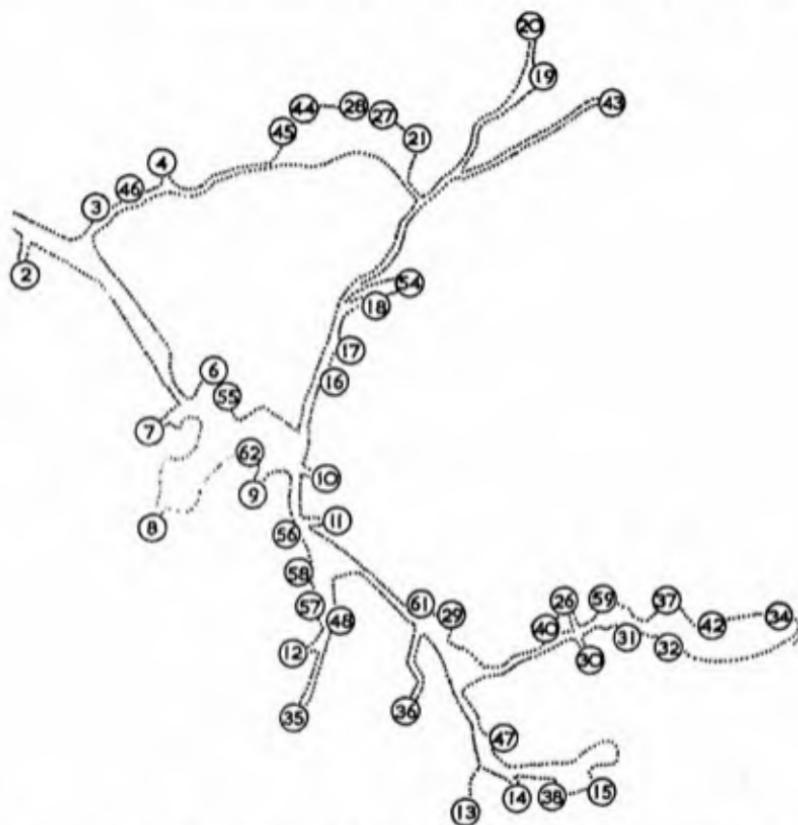


FIG. 5. Plan of the Biban el-Muluk, Thebes, showing the location of some of the Royal Tombs. That of Tutankhamen is No. 62, while Ramses II occupied No. 7 and Seti I No. 17. Tomb Nos. 22-25 are to be found in the adjacent Western Valley, not shown on the map.

coverers: it was at first supposed that the insignificant pit marked the burial place of that not very important monarch. But in fact, as it later became evident, the pit had merely served as a convenient hiding-place for some of the funerary items of which looters, when interrupted in the midst of their work, had unburdened themselves as they fled.

In 1909, the year following the discovery, it chanced that Lord Carnarvon was involved in a motor accident, and his injuries were such that a long period of convalescence was necessary, part of which he spent in Egypt. Here, he became interested in the excavation activities sponsored by Davis and decided to finance a continuation of the work himself, though it was not until 1914 that he was able to secure the concession to dig in the Valley of the Kings. As his technical adviser he selected Howard Carter,<sup>23</sup> one of Davis' assistants from the Service of Antiquities, who inclined to the view that the small pit containing the Tutankhamen items was not the burial place of that monarch and who entertained the idea that the real tomb might be located somewhere in the vicinity.

Carter began operations in the central part of the Valley but, with the outbreak of war in Europe, work had to be abandoned until 1917, when the digging was restarted. Where others before him had been content to make trial holes in likely looking places, Carter adopted the slow and tedious method of clearing the ground down to bedrock, secure in the knowledge that if, in fact, there was anything to be found, such a procedure would be bound in time to reveal it. To assist him in this task, he made a large-scale map of the area, divided into sections, each of which was ticked off as the excavation of it was completed. But after working for five successive seasons, in the course of which surface debris weighing nearly a quarter of a million tons was removed, there was still no sign of the missing tomb, or indeed of any tomb, and the available funds had run out. At a meeting with his patron in England to consider the position, Carter was promised support for one more season—in the course of which his workmen unearthed the topmost tread of a flight of sixteen steps which led invitingly down to a sealed door in the hillside!

That door, as all the world now knows, gave admittance to the unpretentious tomb which the high priest Ay had relinquished on Tutankhamen's behalf. And, unbelievably enough, the burial proved to be virtually intact for, although there were signs of two attempted robberies, little had been stolen, thanks to a timely interruption of the thieves on both occasions.

When the stone wall which blocked the entrance was removed the excavators found themselves in a sloping passage, half-filled with stone chippings, which led to another sealed doorway. Howard Carter has recounted how, in the tense moments which followed, a hole was made in the masonry, large enough to allow

the insertion of a lighted candle. Expectantly, he then peered into the room beyond and at first could see nothing:

*But presently, as my eyes grew accustomed to the light, details of the room emerged slowly from the mist, strange animals, statues, and gold—everywhere the glint of gold. . . .*

There were four rooms in all, crammed with so many hundreds of objects that the task of cataloguing the various items required ten years to complete—state chariots and wooden shrines, couches and thrones, chairs and footstools, statues and toilet boxes, vases and unguent jars, boxes and chests, bows and arrows, beds, torch-holders, ivory whips, papyrus sandals, ceremonial walking-sticks and perfume boxes, not to mention numerous pieces of jewellery, which included gold and silver bracelets, girdles, amulets, scarabs, face-masks, pectorals, rings, plates, bangles, circlets, collars, aprons, ear-rings, sceptres, anklets, fans and miniatures. But the most striking of all the tomb's contents was found in the so-called 'Golden Hall', the actual burial chamber of the monarch. Almost the entire room was taken up by an immense shrine, completely overlaid with gold and displaying two great folding doors, behind which lay a second shrine, likewise covered with gold, as was a third shrine within it. This, on being opened, revealed yet another shrine, enclosed within which was a magnificent yellow quartzite sarcophagus, containing the coffins of the king. Within the first coffin, which was entirely overlaid with gold, was an even more elaborate second coffin which, in turn, enclosed a third coffin, moulded into the likeness of the dead Pharaoh and containing his mummified remains. This third coffin, of solid gold, turned the scale at more than two hundredweights. . . .

#### IV

Two questions at once arise. If such magnificence attended the burial of so young and comparatively insignificant a monarch as the nineteen-year old Tutankhamen, what unimaginable riches did the ancient plunderers find in the elaborate and extensive tombs of such powerful monarchs as Seti I and Ramses II? And if the burial place of Tutankhamen somehow contrived to pass unscathed through thirty centuries of depredation, is it not possible that other and perhaps even more splendid sepulchres also succeeded in escaping the thieves?

That such a possibility exists there can be no denying, for the

total number of interments in the royal Valley is unknown and remains largely a matter of guesswork, though it has to be recognised, of course, that each new discovery made in the past has inevitably lessened the prospect that yet more tombs still await a finder. Had the Necropolis been reserved exclusively for the thirty or so Pharaohs of the New Empire period, a reliable answer to the problem of how many tombs remain to be found would be provided by the equation  $x - y = z$ , even though not all the royal tombs that are known can be identified, and several of them appear to have changed hands in the absence of any effective protest on the part of their deceased owners. But as matters are, not only Pharaohs but also Queens and Princes (who were not relegated to the Biban el-Harim until the onset of the 19th Dynasty) and even high officials were accorded the privilege of preparing a last resting place for themselves in the royal Necropolis, and there is now no way of ascertaining precisely how many persons were so honoured. Moreover, although there are good reasons for believing that the Pharaonic burials in the Biban el-Muluk began with Tuthmose I, there is no certainty that they came to an end with the last of the Ramessides.

During the 19th Dynasty, thanks to the importance of the New Empire's territorial acquisitions in Asia, the political centre of Egypt gravitated northwards to Per-Raamses (the House of Ramses), one of several cities built in the Delta with the aid of Hebrew slave labour. Thebes, however, remained the acknowledged religious capital of the land, and it was here that the kings of the 19th and 20th Dynasties continued to be buried. With the death of Ramses XI, however, a northern Governor by the name of Nesibanebbed (the Smendes of the Greeks) seized the opportunity to proclaim himself king and, no doubt because his wife was a Theban Princess, he was afterwards recognised as the legitimate ruler by Manetho, who regarded him as the founder of the 21st Dynasty.

Throughout the reigns of Nesibanebbed and his successors, the dynastic seat was at Tanis (the biblical Zoan), and it was here that the Delta kings built their tombs. Several of these structures have been excavated by Pierre Montet in recent years and found to contain many valuable items, such as golden goblets and face masks, not to mention coffins of solid silver. But at the time of these burials the real wealth of the country was still to be found at Thebes, and that considerable authority also continued to reside at the old capital is shown by the fact that the rule of the Tanites did not at

first extend to the southern part of the now divided kingdom. At Thebes, Herihor, the all-powerful terrestrial representative of Amon-Ra, himself took over—an act of usurpation which had long been foreshadowed by the lavish endowments of the Ramessides who, during their lifetime, had made the priesthood the richest and most influential establishment in the land.

When the reign of Herihor came to an end he was succeeded by his son Piankhi, who was in turn followed by Pinodjem I. This Pinodjem temporarily reunited the kingdom by marrying the daughter of Psousennes I, the second of the Delta kings, though Thebes afterwards reverted to independence under Pinodjem II. And from the fact that the mummified remains of several of these priest kings, together with their wives and offspring, were found among the collection of despoiled royalty recovered from the Deir el-Bahri cache, it would appear that they, too, had been buried in or near the plundered Necropolis, though their (doubtless rifled) tombs are not known. But even more significantly, not all the bodies of these rulers have been found and, on the not unreasonable assumption that the missing monarchs were also laid to rest in the vicinity of the Valley, their absence would seem to indicate, either that their bodily remains were destroyed by thieves who found and broke into their tombs or that their mummies still lie in the undisturbed and evidently well-hidden sepulchres in which they were laid to rest. The possibility exists, at all events, that several of these kings, taking a lesson from the fate of their predecessors, reverted to the original intention of Tuthmose I: secret burial in a concealed grave.

If this is in fact the case, the difficulties of discovery by traditional archaeological methods promise to be very considerable, as indeed the continued failure to find any trace of the tombs serves to show. But there is now an electronic instrument on the market, with an effective range of 25 feet, which, though primarily intended for use as a metal-detecting device, can also be employed effectively to reveal the presence of underground cavities, as has recently been demonstrated by Charles Quarrell,<sup>109</sup> the well-known British speleologist.\*

\* The instrument is the Fisher M-scope, a product of the Fisher Research Laboratory Inc., of Palo Alto, California. Quarrell happened to be using the device in the Ashdown Forest area of Sussex when he noted an unexpected variation in the signals which were being emitted, about which he reports (private communication, 19 January, 1959):

*Upon further investigation and again using the detector, we discovered that it was showing the line of a subterranean passage, hitherto not known locally. . . .*

As for the number of sepulchres known to exist in the Valley of the Kings, this has varied considerably during the past two thousand years. On the occasion of Richard Pococke's visit in 1737, entrances to fourteen tombs were to be seen. Five of these were blocked up, but the remainder, from the careful descriptions given, would appear to have been those which have since been identified as belonging to Menephtah, Amenmesses, Seti II (19th Dynasty), and Setnakht, Ramses III, Ramses IV, Ramses VI, Ramses X, Ramses XI (20th Dynasty). But in Strabo's day as many as forty openings were in evidence, while Diodorus makes reference to the existence of a priestly register which listed forty-seven; and it thus appeared, when at the start of the 19th century Napoleon's savants enumerated no more than eleven, that not a few lost and forgotten sepulchres remained to be found.

By dint of including some of the lesser rock chambers, which he did not allow to be royal, Belzoni succeeded in bringing the total up to eighteen. The much higher figure mentioned by the Egyptian priests he dismissed on the grounds that it must have related to tombs outside as well as inside the royal Valley, for he was not prepared to concede the possibility that any burial place of note had escaped his attention. ('It is my firm opinion that in the Valley of the Biban el-Muluk there are no more than are now known in consequence of my late discoveries.')

By about mid-century, however, twenty-one tombs had been shown to exist in the main Valley and four more in its Western offshoot, making twenty-five in all, whereupon A. H. Rhind<sup>111</sup> declared himself as satisfied that any further discoveries were likely to be limited to the Western section. ('As for the Biban el-Muluk, having dug at I believe every available spot it presented, not bearing evidences of previous search, I feel reasonably confident that no more sepulchres except those already known exist within its proper limits.')

Nevertheless, the next fifty years or so witnessed the succession of discoveries associated with the name of Victor Loret and with the team of excavators whose services were retained by Theodore Davis. But the last-named, after several years of unrewarding effort which followed the finding of the burial place of the Pharaoh Haremhab in 1908, eventually came to the conclusion that the last of the hidden sepulchres had been located ('I fear that the Valley of the Tombs is now exhausted'), a view which was also expressed by Sir Gaston Maspero when, as head of the Service of Antiquities in 1914, he signed the concession en-

abling Lord Carnarvon and Howard Carter to dig in the royal Necropolis at a time when the numbering of the tombs had reached sixty-one. . . .

In the light of these pronouncements, all of which preceded the Tutankhamen discovery, it would certainly seem that there is need for caution in suggesting that the Valley has now given up the last of its secrets.

## CHAPTER SIX

### GRINGO GOLD

*Proposition: That hidden somewhere among the canyons of the Superstition Mountains of Arizona, there is to be found an immensely rich source of gold known as the Lost Dutchman Mine.*

#### I

THE AMERICAN SOUTH-WEST abounds with tales of gold strikes accidentally made, somehow forgotten and afterwards diligently sought—reputedly rich diggings now rejoicing in such names as the Lost Breyfogle, the Lost Frenchman, the Lost Nigger, the Lost Sublett, the Lost Pegleg, the Lost Padre and many another. That some (though not all\*) of these missing mines are real enough, there is good reason to believe, for their existence and their worth were attested by the steady stream of gold nuggets which their owners brought into neighbouring towns to exchange for provisions and goods.

Where a lone prospector was concerned, understandably secretive when visiting a community in which every other man was a potential claim jumper, it often happened that the precise whereabouts of the source of his wealth was lost when he died. But on occasion, the knowledge of the location of a particular mine was shared by many, as in the case of an elusive excavation, now obliterated, known as the Lost Dutchman (not to be identified with the Adams Diggings, another vanished source of gold which, confusingly enough, has also been given this name). Prior to the 1880s, the mine was known to scores of people of various nationalities, some of whose descendants, it may well be, cherish the secret of its whereabouts to this day, though it has successfully

\* On a day in July, 1905, an obscure prospector named Walter E. Scott emerged from California's formidable Death Valley and let it be known that he had found a source of gold so rich that mere money no longer had any meaning for him. And to prove it, he embarked upon a sensational spending spree, lasting many years, which began with the hiring of a special train for a forty-five-hour journey to Chicago and ended by his building a luxurious, two-million-dollar, Spanish-style, residence (now a tourist attraction known as Scotty's Castle) perched 3,000 feet high in Grapevine Canyon, on the fringe of the Californian desert. Nevertheless, the supposed mine was a myth, for it later transpired that the real source of the spendthrift's undoubted wealth was one Albert M. Johnson, an eccentric Chicago millionaire!

defied the hundreds of attempts which outsiders have made to find it.

The probability is that a group of Apaches were the original discoverers of the lode, and there is some reason to suppose that its existence was known to the Indians long before they encountered their first white man in the guise of a Spanish padre. But, however this may be, it was during the third decade of the 16th century that numbers of venturesome priests journeyed northwards from Mexico City and so reached the Gila (pronounced HEE-la) Valley, famous as the acknowledged home of the so-called monster of the same name. Beyond the Valley the outer walls of a range of rugged mountains rose sheer out of the surrounding desert, and the newcomers christened these towering ramparts *Sierra de Espuma* (Mountains of Foam), thus commemorating a local flood legend. Subsequently, their English-speaking successors renamed them the Superstition Mountains, in deference to yet another expression of native credulity.

In this forbidding region the Apache hunted deer, fought off members of the less warlike Pima tribe—and happened upon gold. And here, no doubt after initial encounters with the white man had shown him to be friendly, the Indians trustingly revealed the place where there existed such abundant supplies of the gleaming metal—a voluntary act which their descendants were to have good reason to regret and a mistake which they were most careful not to repeat.

Some two centuries after this imprudent disclosure, it appears, King Ferdinand VI of Spain made an extensive grant of land to a certain Don Miguel Peralta de Cordoba, at the same time conferring upon him the grandiose title of Baron of the Colorados. The award, bestowed in return for services to the Crown, embraced an area of some thousands of square miles of territory in the Gila Valley, including the adjacent *Sierra de Espuma*. And when, in 1759, King Ferdinand was succeeded by Charles III, the careful Don Miguel sought confirmation of both title and grant, thus ensuring that, on his death, they passed unchallenged to his heir, Don Enrico Peralta.

Exactly how and when the Peralta family learned that an unbelievably rich source of gold existed in the mountainous region of their domain is uncertain. It has been suggested that the information was passed on to them by the ecclesiastical authorities though, according to another account, three sons of the house—Don Pedro, Don Ramon and Don Manuel—happened upon it while on

a trip of exploration. Yet a third version is couched in more romantic terms, and suggests that the discovery came about indirectly as a result of their sister, Doña Rosita Maria, bestowing her favours upon one Carlos who, when news of the association leaked out, wisely, if somewhat ungallantly, betook himself to the hills. The outraged father sent a tracker after his daughter's betrayer who, in successfully eluding his pursuer, accidentally led him to the gold. But however this may be, the intelligence was received none too soon for, between 1800 and 1850, there occurred a series of events which were destined to have a profound effect upon the Peralta fortunes.

At the beginning of the 19th century Mexico was a Spanish province which extended far into what is now the United States of America. There then began a struggle for freedom which culminated, in 1821, in separation from Spain and in the setting up of the first of a succession of independent governments which tended to be weak, corrupt and ineffectual. In these tempting circumstances American expansion southwards was inevitable and what is now the State of Texas was blatantly annexed to the Union in 1845. No less inevitably, Mexico was decisively defeated in the war which followed. Not only was she compelled to acknowledge the loss of Texas, but she also ceded to her powerful neighbour California, New Mexico, Arizona and other areas—in all, more than half of the territory she had so fleetingly been able to call her own.

In 1848, under the terms of the Treaty of Guadalupe Hidalgo, the Rio Grande was fixed as the southern border of Texas while, beyond El Paso, the new frontier line followed the Gila River to the Pacific, thus cutting the Peralta domain into two and leaving the family mine on the wrong side of the border. And as if this were not misfortune enough, the Americans quickly came to realise the value of certain travel routes which traversed a strip of land on the Mexican side of the river. The outcome was the Gadsden Purchase, whereby, in 1853, it was arranged that his land should be sold for \$10,000,000, by which deal U.S. territory was pushed another 100 miles to Nogales.

A few years later, according to assertions subsequently made by the notorious James Addison Reavis, the head of the Peraltas deeded the family lands to a man named Willing who, in turn, disposed of the rights to Reavis. At all events, after biding his time, the supposed new owner, armed with documents which purported to provide proof of his claim, in 1885 made formal application for

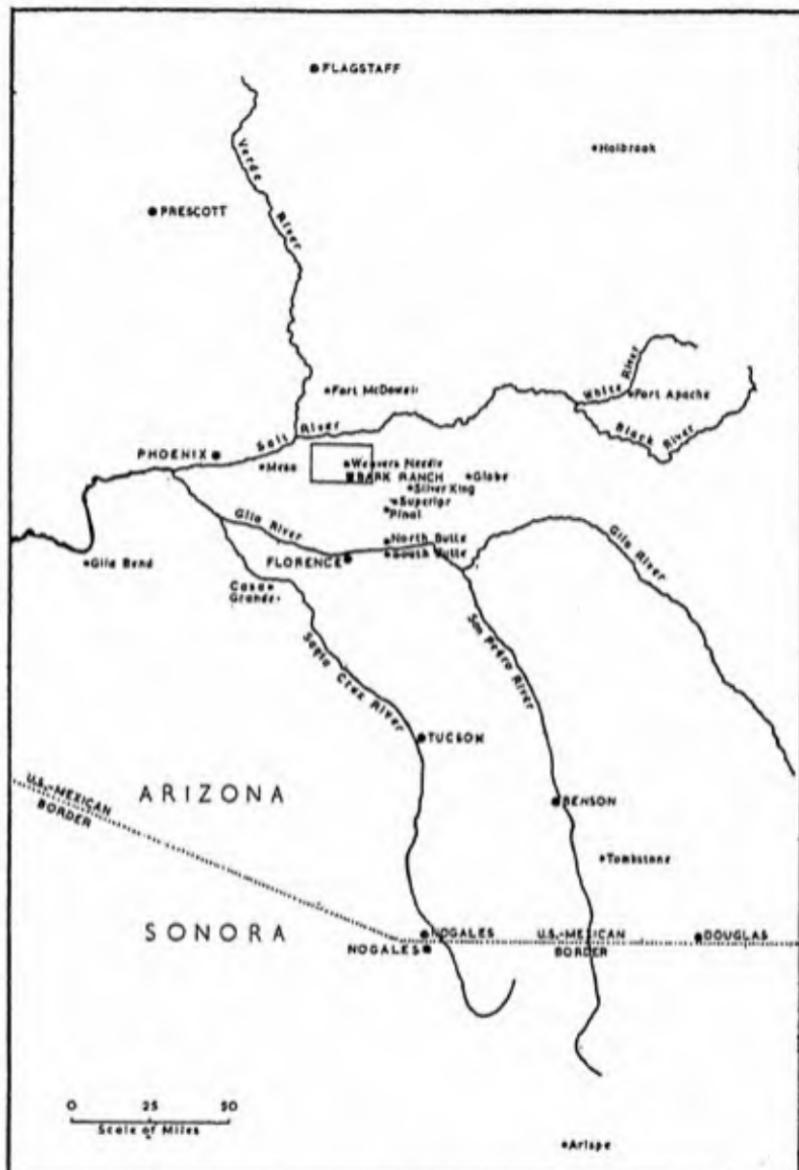


FIG. 6. The Gila Valley region of Arizona and the adjoining Mexican State of Sonora. The approach to the Superstition Mountains from the south was across the Sonoran Desert to Tucson, over the Gila River at the Two Buttes and along the Bark Valley. See Fig. 7 (p. 150) for an enlargement of the rectangular area which encloses the Bark Ranch and Weaver's Needle.

official recognition of the Peralta-Willing transaction and, at the same time, invoked the provisions of the Treaty of Guadalupe Hidalgo and the Gadsden Purchase, whereby the United States had agreed to acknowledge existing land titles.

As may be imagined, this somewhat belated claim caused consternation among the local property owners. But prominent lawyers, among them the renowned Robert G. Ingersoll, declared it to be incontestable and, in 1887, it was officially acknowledged to be legitimate. Thereafter, Reavis and his wife ('the only blood descendant of Don Miguel de Peralta de Cordoba', whom he had accidentally encountered 'in a Mexican hamlet while investigating the Willing title') lived lavishly on the tributes exacted from the Southern Pacific railroad, the Silver King Mine and other flourishing concerns. But, in 1893, a member of the staff of the *Florence Citizen*, a newspaper edited by T. F. Weedin, an unrelenting opponent of the Reavis pretensions, by chance made the interesting discovery that certain of the supposedly ancient documents relating to the Peralta land grant were printed in a type of recent invention, while some of the paper on which the printing had been done bore the watermark of a modern Wisconsin paper mill! Further investigation brought to light that Reavis, after making a prolonged study of the Peralta family history, had skilfully amended the original documents to suit his own ends, for which interpolation he was sentenced to six years in Santa Fe penitentiary.

In the meantime, though the Peralta estate had been engulfed by Arizona, those into whose hands the mine had fallen were unaware of its existence, and the Apaches, who soon found themselves at war with the newcomers, were hardly likely to reveal it to them. The Mexicans, on the other hand, were neutrals in this particular struggle, and at first it was easy enough for the Peralta mule trains to enter Arizona Territory from the adjoining State of Sonora, ostensibly on a trading trip, and for one or more of the teams to slip unnoticed into the mountains, there to load up with gold ore and as quietly to return. The Apaches, for their part, appear to have raised no objection to these illicit visitations until an event occurred which was completely to alter the character of the enterprise.

Reports of the incident vary, noticeably in regard to the number of the Mexican participants, which would appear to have been anything from sixty-eight to as many as four hundred men, accompanied by horses and mules. But what has been established is that

a large party arrived to collect ore from the mine as usual, led by a Don Enrico Peralta, who can hardly have been Don Miguel's son and who was presumably a grandson of the same name. As was customary on these occasions, some of the Indians made camp near that of their visitors, who were always ready to share their ample food supplies with their less-fortunate hosts. But, towards the end of the visit, one of the peons molested an Apache woman.

Fighting broke out at once, and the Mexicans, who found themselves outnumbered, were soon hard pressed. From an eye-witness account given by an ageing Apache half a century later, it appears that the only two escape routes leading to the south were strongly held by the Indians, so that their adversaries were forced to take a north-westerly course, fighting desperately as they went. Indian reinforcements, meanwhile, had been summoned from nearby villages and, on the third day of the battle, the unequal struggle reached its foregone conclusion. Very few of the Mexicans managed to escape, to carry home the grievous tidings that among the slain was Don Enrico himself while, at the scene of the massacre, the triumphant Indians cut loose the precious loads from the dead and captured mules and unconcernedly left the rich ore to bestrew the ground where it fell. . . .

## II

In 1871, five or six years after this disaster, Jacob Waltz and Jacob Weiser, two men who had been boyhood friends in Germany and who had since adventured together in the Americas, found themselves in the small township of Arispe, in the Mexican State of Sonora. A fiesta was in progress and the partners paused to watch a game of cards which was being run by a professional card sharper. That the game was crooked was evident enough and, suddenly, one of the players, who had been losing heavily, denounced his opponent as a cheat. At this, the gambler immediately drew a knife and plunged it into the shoulder of his accuser, whereupon Weiser hit the attacker on the head with the butt of his revolver and knocked him out.

The friends assisted the stabbed man to his home, where he, out of gratitude for the service they had rendered him, offered to repay them in a somewhat unusual fashion—in a manner dictated, as he explained, by his straitened circumstances of the moment. His name was Miguel Peralta and, though heavily in debt, he was potentially an exceedingly wealthy man, for he was the rightful owner of one of the richest gold mines in existence. Unfortunately,

not only was the mine located in the newly established Territory of Arizona, but it lay in a mountainous region much frequented by once friendly, but now hostile, Apaches, who had recently slain his father and many of his followers. If, however, despite the very real dangers involved, his rescuers would agree to accompany him and his men to the mine and assist in holding off the Indians they could have a half share of any gold that was obtained.

And so, with Peralta and a strong force of his peons, Weiser and Waltz slipped over the border and, after crossing the Gila River and the intervening desert, cautiously entered a maze of mountain defiles and eventually reached the mine. Here, although work went on for several weeks, not an enemy was seen, and the entire party returned safely and without incident to Mexico. Much pleased by the outcome, Peralta now made a further proposal. The promised half share of the venture amounted to some \$30,000. He, however, most desperately needed the whole of the money and, in return for most of their share, he was prepared to give Waltz and Weiser written permission to return to the mine, from which an equivalent amount of ore could be taken and more in addition. After due consideration, the two partners decided to accept this offer. They had already seen for themselves that an abundance of gold was there to be had for the taking, while their earlier failure to encounter any Indians persuaded them that the Apaches represented a danger which need not concern them unduly, even though on this occasion they would be entirely on their own.

The return journey across the Sonoran Desert to the mountains was uneventful and, within a few miles of their destination, the partners made camp at a convenient water supply. Later, as they approached the mine on foot, they heard noises ahead of them and, advancing cautiously, espied two figures, brown of skin, busily engaged in digging for gold! Momentarily panic stricken, Waltz and Weiser levelled their rifles and fired point blank at what they took to be a couple of stray Apaches—and then discovered to their dismay that their victims were two of Peralta's peons, whose habit it was, with or without the knowledge of their master, to make periodic visits to the mine in order to help themselves to some of its contents.\*

\* It is from out of this distressing incident that there would appear to have grown the legend of a murderous Dutchman, complete with a long white beard, who jealously stood guard over the mine and preserved the secret of its whereabouts by shooting dead all who ventured near it. Coupled with this romantic notion is a garbled account of how, shortly before the Gadsden Purchase, the mine was discovered by a member of the Peralta family, who returned home and organised an expedition of four hundred members of his community, the inten-

Overwhelmed by the tragic outcome of their over-precipitate action, the partners buried the two Mexicans and the next day set none too happily to work, ever mindful of the possibility that the sound of their shots echoing up and down the canyon walls might have already warned the Apaches of their presence. But day followed day without their being disturbed and, after the passing of several weeks, a satisfying quantity of gold had been safely cached in the vicinity of the mine. Then, one morning, they awoke to find that a pack mule had somehow managed to get within reach of what remained of their store of provisions and had spoiled the lot. In the face of this emergency, it was decided that Waltz, taking two of the horses with him, should obtain fresh flour from a mill known to be situated on the Gila River, while Weiser stayed behind to keep an eye on things and to carry on work at the mine.

It had been estimated that Waltz would be back in three days—four at the most. But, back at the camp, the fourth day came and went without any sign of him and when, on the morning of the fifth day, a party of Apaches made a surprise attack, his waiting partner's worst fears were seemingly confirmed.

The assault began with a shower of arrows which killed all the animals but one and, hastily mounting the solitary horse which remained alive, Weiser galloped off, stopping at intervals to keep his pursuers at bay with his rifle and then racing ahead once more. In the end, and despite the fact that his mount had been killed and he himself seriously wounded, he managed to escape and somehow made his way on foot to the Gila River. Here, in a dying condition, he was found by friendly Pima Indians, who took him to the nearby home of a Dr. John D. Walker.

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tion being to collect as much gold as possible before the territory was acquired by the United States. But Apaches massacred the entire party, with the exception of two children, who lay hidden under a bush until the fighting was over. The young survivors eventually managed to find their way home and, years later, with a companion, they returned to the mine to collect some gold. In the midst of this operation, however, they were found and shot by Jacob Waltz, who also disposed of his partner and thus made the mine his own. News of the so-called Dutchman's rich strike quickly spread, and many prospectors attempted to follow him to it whenever he left town after purchasing supplies. But the wary Waltz either eluded those who sought to trail him or turned his gun upon them—the story being that he subsequently confessed to having killed no less than eight (some accounts say eleven) of the more persistent of his pursuers, one of them his own nephew!

In Phoenix these and other legendary tales are kept alive by members of the Dons Club who, towards the end of February each year, conduct a mock search in the mountains for the entertainment of visitors. Hundreds of people now take part in this annual event, which entails an all-day hike and ends with a camp-fire fiesta.

Realising that, despite all that had been done for him, he had not long to live, Weiser recounted how Waltz and he had come to be at the mine, how the mule had helped itself to their provisions and how the Apaches, after intercepting his partner, had then attacked him. And before he died, he bequeathed to his benefactor a raw-hide map, on which was marked the route from Sonora to the mine. But Dr. Walker, though not a little interested and in no way disinclined to believe what he had been told, for various reasons made no attempt to verify the truth or otherwise of the story.

Had he done so, he might have learned that his informant had been mistaken in regard to one important detail: Jacob Waltz had not been ambushed and killed on his way back to camp, as Weiser had supposed. What in fact had happened was that, in the course of his trip, he had met with one vexatious delay after another—a loose shoe on one of the horses; the temporary absence of the blacksmith upon whom he called; an unexpected shortage of flour stocks at the mill; and a wait until the following morning for grinding operations to begin—with the result that it was not until dusk of the fatal fifth day of his absence that he at last got back, to find the camp a shambles and his companion missing.

Convinced by what he saw that Weiser had been killed, Waltz paused only long enough to help himself to some of the gold from one of the caches and then hastened back to Mexico with the news. But Peralta was not at home, and no one knew when he was likely to return, whereupon the despondent Waltz, left completely at a loss by the disastrous turn of events, wandered aimlessly from Tucson (TOO-sahn) to San Francisco and from San Francisco to Phoenix where, within fifty miles of the Superstition range, he eventually settled permanently in 1889.

In the months which followed, Waltz became friendly with a Mrs. Thomas and her foster son, Reinhardt (Reiney) Petrasch. Helena Thomas and her husband had recently come to Phoenix from Denver, where they had adopted Reiney, with his father's consent, when his mother had died. And one day, after Waltz had found the lady in considerable distress, she confided that she was overburdened with business worries (she ran a bakery) and was in serious financial difficulties. At this, Waltz produced a quantity of gold ore, helped in settling her debts and subsequently satisfied both her and Reiney's curiosity concerning the source of his unsuspected wealth by explaining that it had come from a cache in the nearby mountains, where he and a now dead partner had worked a fabulously rich mine twenty or so years ago. He promised, more-

over, that in the following spring the three of them should pay a visit to the place and recover a further quantity of ore.

But there then occurred (in 1891) a disastrous flooding of the Salt River and its tributary, the Verde, occasioned by warm rains falling on adjacent and deeply snow-covered heights. A raging torrent swept all before it, and in the Salt Valley the river rose so high that its waters reached the centre of Phoenix, more than a mile from their normal course. Waltz was one of the victims of this unprecedented inundation and, thanks to the exposure to which he was subjected, he contracted pneumonia, to which he succumbed in the following October.

Satisfied that, from the directions given by Waltz before he died, it should be possible to locate the mine without difficulty, Helena Thomas disposed of her Phoenix property. She and Reiney then drove to First Water, on the northerly edge of the Superstitions, and from there journeyed into the mountains on foot, carrying supplies on their backs. The mine, however, proved most elusive and when, at last, it became evident that the task of finding it was not going to be as easy as they had supposed, the two searchers sought the assistance of Reiney's father and elder brother, Herman, both of whom were experienced prospectors. Thus reinforced, they persisted in their efforts for many months until Reiney, discouraged by their continued lack of success, finally gave up in disgust.

Stories about the mine, meanwhile, not to mention the activities of the four gold seekers, had come to the notice of James E. Bark, the new owner of a ranch on the western edge of the Superstition range, with headquarters situated in a valley which gave ready access to the mountains from the south. And before Reiney left his more hopeful companions to continue the search without him, he told what he knew of the matter to Bark, who thereupon gave the missing mine the name of *The Lost Dutchman*, in memory of Jacob Waltz.

By this time Bark had become so interested in the Peralta gold, located as it was, by all accounts, somewhere on his property, that he decided to make a search for it himself. And when, a few years later, he became friendly with Sims Ely,<sup>45</sup> another newcomer to the district, he invited him to join him in the enterprise as a spare-time occupation. And it is thanks largely to the painstaking investigations made by these two men that so much of the mine's history has been revealed. It was learned, for example, that the first person in Arizona to organise a search for the mine was a man named Simon Novinger, who first heard of it in the late 1860s, while

ranching in California. One day he was approached by an orphan white boy, whose parents had been killed by Indians in his infancy and whose captors, in the course of raising him, had passed him on from one tribe to another. Eventually, when their young prisoner was nearing the age of fourteen, Apaches in Arizona had allowed him to go free and he had been wandering about, homeless, ever since.

The boy, who made himself useful about the Novinger ranch, was present when its owner received some gold nuggets in payment of a sum of money owing to him, and the fact that the metal had a monetary value interested the youth greatly. He knew, he declared, of at least two places where there were plentiful supplies of it—on a hillside and also in the vicinity of a distinctive mountain peak, both of which locations he described in considerable detail. The youth then announced that he proposed to return to Arizona to obtain some of the gold for himself, and nothing would persuade him to change his mind. How he fared is not known, for he was never heard of again. Novinger, meanwhile, convinced that the boy had been telling the truth, disposed of his ranch and, with half a dozen companions, set off in search of the gold-studded mountainside. But although he and his associates found what they sought, the discovery availed them little: by the time they reached it, Rich Hill had already given up thousands of dollars worth of its gold to members of the A. H. Peebles expedition who, led by the famed guide Pauline Weaver, son of a white father and a Cherokee mother, had already stumbled upon its wealth.

After this disappointment Novinger took up ranching again, though he did not forget the boy's reference to the second source of gold, to be found in the vicinity of a distinctive peak. It was not until more than ten years later, however, that he and two of his former associates set out to locate this landmark, which they identified as Sombrero Butte, in the Tonto Basin country. As luck would have it, the three men encountered strong opposition from the Apaches and, in the fighting which followed, Novinger accidentally shot himself in the leg, administering a fearful wound which brought the expedition to an abrupt end.

Novinger's decision to make for Sombrero Butte was doubtless influenced by stories of the so-called Doc Thorne Mine, supposedly located in rugged mountain country inhabited by actively hostile Indians who fired silver bullets at unwanted visitors. Rumour had it that, while returning from a professional visit to the Apache stronghold, Dr. Abraham D. Thorne had observed, in

the region of a hat-shaped butte, an area where the ground was covered with outsize gold and silver nuggets. Already, indeed, a party of adventurers had set out in search of the place and had succeeded in making their way towards Sombrero Butte, though Indian reaction quickly persuaded them that it would be most unwise to linger there. And when, two years later, a lone prospector had reported happening upon great riches within sight of a 'butte that looked like a hat' a second expedition, led by no less a personage than A. P. K. Stafford, the Territorial Governor, had made a determined effort to locate the treasure. In the event, Stafford and his companions were unlucky, for in their travels, vainly undertaken, they actually encircled the spot where, five years later, a source of great wealth was revealed. This was at Globe, so named from a spherical boulder of almost pure silver which was found there, a find which led to the discovery of a rich vein of the metal.

The story of the mythical Doc Thorne Mine seems to have had its origin in a strange experience which befell Dr. Thorne in 1865. By many acts of kindness he had earned the gratitude of the Apaches living in the Verde Valley and when, in due course, he announced that he would shortly be leaving the district, his Indian friends let it be known that they wished to show their appreciation of all that he had done for them. They proposed to take him to a place in the mountains where much gold lay on the ground—the only stipulation being that he must agree to make the journey blindfold. Accordingly, his eyes bandaged, Dr. Thorne set off on horseback with his guides from a camp on the northern bank of the Salt River. A stream (which could only have been the Salt River itself) was crossed and, after riding for some hours, the party came to a halt. When the eye covering was removed the doctor beheld the promised gold at his feet and, no sooner was it collected, than he was blindfolded again in preparation for the return journey—but not before he had noted that he was in a canyon and that in the distance there was a distinctive mountain peak and a small structure, quadrangular in shape, which he took to be an ancient ruin. His only other clue to his whereabouts was a conviction that, on again reaching the river, he had on this occasion approached it from the east.

Significantly enough, when, some twenty years afterwards, Dr. Thorne led a group of men to the spot where he believed he had been taken by his Indian friends, he made, not for the Tonto Basin country, but for a canyon in the adjacent Superstition Mountains,

from which there could be seen a small stone structure—and a distant landmark in the shape of a distinctive peak known as Weaver's Needle. Dr. Thorne, however, at no time claimed that he knew the whereabouts of the Lost Dutchman Mine, and it may be accepted that the Indians led him, not to the mine itself, but to the place, or one of the places, where ore taken from it had fallen to the ground after the attack on the mule train of the ill-fated Don Enrico Peralta expedition.

## III

In time, the interest of Jim Bark and Sims Ely in the lost mine became so widely known that even complete strangers would come to them and volunteer odd items of information. In this and other ways a number of surprising facts came to light, not the least of which was that prior to 1882, several people, accidentally and otherwise, appeared to have located without difficulty the mine which in later years so successfully defied all attempts to find it—for a very good reason, as will in due course be recounted.

It was in 1900 that Robert Bowen, a former superintendent of the Silver King Mine, told Ely about the two young ex-soldiers who had discovered gold in the Superstition Mountains twenty years earlier, something of whose story he had already learned from Bark. The two youngsters, recently out of the Army, had arrived at Pinal (to-day a ghost town) from Fort McDowell, on foot, a journey remarkable in that, instead of following the circuitous Apache Trail, the established lowland route, they had taken a more direct course across the mountains. So difficult was some of the country which they encountered, however, that at times the boys thought they would have to turn back. And it was while they were making their way over a particularly rough region that they happened upon what was evidently an old mine.

On the morning after reaching Pinal, the two new arrivals called at the office of Aaron Mason, who managed both a local mill and the Silver King. The boys wanted work, and it chanced that Robert Bowen and Mason's assistant (who afterwards substantiated Bowen's story) were present at the interview. After telling of their discovery of the abandoned mine, the boys produced a quantity of ore which they said they had found there. That it was exceedingly rich in gold was at once apparent to Mason, and he advised them to mark their find and so legalise their claim to it. Understandably excited at the prospects thus opened up to them and confident that they would experience no difficulty in retracing

their steps, the two would-be miners made immediate preparations to return to the mine. Their gold samples, meanwhile, realised more than \$700, which sum was paid to them in coin. Some of the money they spent on equipment and provisions, but they were carrying more than half of it with them when they set off into the mountains.

The boys were expected back at Pinal within ten days and when, a fortnight later, there was no sign of them, Mason instituted a search which eventually led to the finding of one of the missing youths. He had been shot dead, and the fact that his body had been stripped of its clothing suggested that Apaches had been responsible for his murder. Subsequently, however, suspicion fell on a local saloon hand, who suddenly appeared to have far too much money to spend. It was whispered that he had followed his two intended victims to the mine and there killed and robbed them. An enquiry into the recent movements of the suspect was begun, but before his guilt or innocence could be determined, he hastily left town for parts unknown, the bearer of a physical defect which it would be almost impossible to disguise: a twisted foot.

There was a strange sequel to this story fifteen years later, unexpectedly provided by a stranger from Alaska who called upon Ely at his office in Phoenix. He said his name was Ernest Albert Panknin and explained that he had been given Ely's name and address after making enquiries locally about an old mine located somewhere in the Superstition Mountains. He was particularly interested in the whereabouts of a green spring, to be found several miles to the west of the old Silver King Mine. Ely conceded that he knew of such a spring which, at one time, had been covered by a greenish scum. At this Panknin produced a rough map, on which a curved line connecting the words 'Phoenix', 'Florence', 'Silver King' and 'Green Spring' was drawn, and which maintained a westerly direction to an unmarked destination. Panknin explained that the continuation of the line was shown on a second piece of paper and that he had committed to memory precise instructions for locating the mine. Not a little interested, Ely learned that Panknin had obtained his information from a man with whom he had become friendly while in Alaska. For reasons which he had not explained, this friend had declared that it was not possible for him to journey to Arizona himself and, when Panknin confirmed that the fellow possessed a twisted foot, Ely believed that he knew why.

Like others before him, however, Panknin found that, despite

the directions he had been given, he was not able to locate the mine. In the course of the next seven years, after much fruitless searching, he attempted to obtain additional information from his friend in Alaska, only to learn that he was in all probability dead. Despite this disappointment, Panknin still clung to the belief that he would some day find what he sought. But he failed to do so and, when he died in 1934, such knowledge as he possessed perished with him.

Tantalisingly enough, shortly after listening to Bowen's story of the accidental finding of the mine by the two young soldiers, Ely learned of yet another discoverer of the source of Waltz's gold, a prospector by the name of Joe Dearing. Ely's informant in this instance was Daniel Brown, a saloon keeper, who described how, in the summer of 1881, Dearing had arrived at the Silver King Mine looking for work. While waiting for an opening, he took a temporary job with Brown, in the course of conversations with whom he confided that on hearing of the find made by the two soldiers the year before, he had decided to look for the old mine himself. And he claimed to have found it—by reasoning that there was bound to be some kind of a trail leading to it, however faint. He added that he was now awaiting the arrival of his partner, at present prospecting in the Prescott area, before attempting to exploit the discovery.

Dearing in due course obtained a job at the Silver King, where he became sufficiently friendly with his shift boss, John Chewning, to show him a sample of ore which he had brought away with him from the old mine, though at the time he did not say where he had found it. Less than a week later Dearing was dead—killed by a roof fall while at work. It was after this accident that Chewning learned from Daniel Brown the probable source of the sample of ore he had been shown and when, some years later, the closing down of the Silver King left him free to do so, Chewning devoted the remainder of his days to searching for the mine, in between working on a part-time basis for the Bark Ranch. But he did not succeed in his quest.

Neither, for that matter, did anyone else, including scores of other hopeful investigators, prominent among whom were Bark and Ely who, in addition to gathering all the information they could about the lost mine, also made a determined and long-sustained attempt to find it, both in person and by proxy—on occasion they engaged experienced prospectors to search designated areas on their account. As a rule, however, the two partners under-



'The west face of the Superstition Mountains, Arizona



Members of the Dons Club in the Superstition Mountains



Weaver's Needle in the Wilderness Area of the Superstitions



The Big Hole of Kimberley

took these excursions themselves, their headquarters being the conveniently placed Bark Ranch. Usually, the two men restricted their activities to wintertime or early spring, when water supplies and climatic conditions were at their best. It was then their custom to set off on horseback, accompanied by pack animals and an escorting cowhand, and head for a pre-arranged spot. Here, camping equipment would be unloaded and the animals sent back with the escort, who would be instructed to return for them after a lapse of so many days.

These trips into the mountains were never aimless. Each was directed towards a particular area, decided upon beforehand and, as time went on, the pair were able to conduct their search with an increasingly clear picture of exactly what it was that they were looking for. According to Reiney Petrasch and Helena Thomas, their friend Waltz had told them that the mine was a funnel-shaped hole in the ground—a wide, circular opening with sloping sides, ringed by a series of shelves upon which stood timber structures, designed to assist the loaded ore carriers to clamber out of the pit. Waltz also vouchsafed the information that Enrico Peralta, the father of Don Miguel, had started to drive a tunnel into the hillside, below the rim of the pit, with the intention of striking the ore at a lower level. Neither Waltz nor Weiser had bothered with this tunnel, however, as the pit itself had yielded more than enough material of unbelievable richness.

Waltz, moreover, had scoffed at the idea, voiced by one of his listeners, that there was a danger of the mine being found by some wandering cowboy. He was insistent that the place would never be discovered by anyone on horseback. It could be approached only on foot, and it was located in a region so wild and rough that a man could pass within a few hundred feet of it and not notice it. He also mentioned that the route to the mine was by way of a large spring, to be found in one of the canyons. At least three such springs, however, were known by Bark and Ely to have existed in the Superstitions at the time of Waltz's visits to the mine—La Barge Spring, Charlebois Spring and a flowing spring at Marsh Valley, though this last had subsequently been destroyed by an earthquake.

The fact that the mine was funnel-shaped was later confirmed by Daniel Brown who, in repeating Joe Dearing's conversations with him, described the place in these terms. Dearing, it seemed, had found the pit partly filled with debris, presumably washed into it

by heavy rains and he, too, had reported the existence of a tunnel, lower down the hillside.

Added confirmation, if it were needed, was obtained by the two investigators in 1910. While on a trip to the Arizona town of Humboldt, Bark heard mention of an aged Mexican woman who was reputed to have visited the mine in her youth. With Ely he tracked her down to the adjoining mining camp of Big Bug and she proved to be a widow by the name of Maria Rables. In response to the questions put to her, she related how, as a girl of fourteen, she had journeyed by mule from Sonora to a mine in the Superstition Mountains in the company of her sweetheart, Juan Gonzales. This Gonzales had earlier been to the place as one of Miguel Peralta's peons and now he and a number of companions were making a private trip of their own—using their master's transport to steal his gold!

To the best of her recollection, the ore was brought up from a shaft containing many short ladders which stood on a series of terraces. The rock was carried up in sacks. It was then crushed and sieved, the gold separating in the form of small particles, not unlike grains of wheat. After several days thus profitably employed, the party made its way to New Mexico, where Maria and Gonzales were married. When the proceeds of the mine robbery were spent, Gonzales took to banditry and so met with a violent end. His widow had then married another suitor, one Jose Rables, who had brought her to Big Bug.

Bark and Ely had no reason to doubt the woman's story—indeed, it tended to confirm all that they had learned from other sources. But it did raise once again a question which had bothered them increasingly as time went on. If, as seemed evident, a succession of people in days gone by had made their way to the mine without difficulty and others had happened upon it either by accident or merely by looking for it, why, then, had later searchers, including themselves, been unable to find it?

The answer to this puzzling question came in 1912, thanks to a friendship which existed between an acquaintance of Bark's called George Scholey and an old Indian known as Apache Jack. One day, Scholey lugubriously complained to his friend about the need to work so hard for a living, whereupon the Indian, by whom the lamentation was taken more seriously than it was intended to be, suggested that his companion should find himself a mine, adding that a particularly rich specimen existed in the nearby mountains!

As a result of this conversation, which Scholey duly reported

to Bark, a hunting trip was arranged for the two friends. But, after spending a fortnight in the wilds without there having been any further reference to the mine on the part of his taciturn companion, the impatient Scholey demanded to know where it was to be found. At the time the two men were in the vicinity of the summit of Black Mountain and, by way of making reply, the Indian merely gave a wide sweep of his arm, which took in a substantial area of the surrounding countryside, including Tortilla Mountain and Weaver's Needle.

Later that day Apache Jack became more talkative and, though he did not disclose the precise whereabouts of the mine, he gave Scholey an account of the Indian attack which had resulted in the wiping-out of the Peralta expedition more than forty years earlier, adding that, in view of the trouble caused by the existence of the gold pit, it was later decided to discourage further visitations to it by filling it in. Accordingly, throughout the winter of 1881-2 (or possibly that of 1882-3), the squaws had laboriously collected all the loose rocks in the neighbourhood and hurled them into the hole. The surface was then carefully smoothed over until no trace of the opening remained. . . .

## IV

It was in the middle 1890s that Bark and Ely began their long hunt for the Lost Dutchman Mine and, during the next twenty-five years, they methodically traversed, on foot, an area of some 250 square miles. That they did not succeed in finding the mine prior to 1912 may be attributed to the fact that, until then, they were blissfully unaware that it had been filled in. And that it continued to elude them in the years which followed affords an eloquent tribute to the thoroughness with which the task of effacing it had been carried out.

But although the two partners failed in their mission, the detailed account of their investigations which Sims Ely published in 1954 offers an indispensable guide to all who would follow in their footsteps.\* Certainly, from the evidence thus provided, there

\* *The Lost Dutchman Mine* (William Morrow and Co. Inc., New York; Eyre and Spottiswoode Ltd., London). This purports to be a factual account, and it may be accepted as such. The only apparent inconsistencies are to be found in an *Introductory Note*, wherein it is asserted that the author of the book first heard the story of the mine from Jacob Waltz in person. Sims Ely himself, however, makes no such claim and, indeed, offers a contradiction in the second paragraph of Chapter 9:

*For my part, the trail, however, was already relatively cold when I arrived in*

would appear to have been established beyond all reasonable doubt the fact of the existence of the mine—the story of which, at the time their search began, was looked upon by many people as a pleasing but legendary tale. Again, it appears to have been established that the source of Waltz's gold is in all probability located not far from the landmark known as Weaver's Needle, in the Superstition Mountains, rather than in the vicinity of Sombrero Butte, in the neighbouring Tonto Basin country, as Simon Novinger and others supposed. And there is also provided a record of the testimony of many persons who were associated, directly or indirectly, with the mine—evidence which contains not a few potentially valuable clues, among which may be mentioned the following:

*Helena Thomas*

As a result of her conversations about the mine with Jacob Waltz, she and Reiney Petrasch first drove to First Water, on the northerly side of the Superstitions, and then set out on foot. Their instructions were to go over the mountain from a cow-house and down to a big spring.

*Robert Bowen*

The two young soldiers stumbled upon the mine while making a short-cut across the mountains which lie between Fort McDowell and Pinal. When asked by Aaron Mason if they were sure they could find their way back to the place where the gold had been found, the boys replied that it lay in a northerly direction from a sharp peak, mentally identified by Mason as Weaver's Needle. Arrangements for the return journey were made on the understanding that the distance from Pinal to the mine was not more than 25 miles.

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*Arizona. Four years had gone by since Waltz had revealed his secret, and the man himself had been dead nearly three.*

The *Introductory Note* would also have the reader believe that every man who has set out to look for the lost mine since 1895 has met with a violent end. But Sims Ely, for one, provides a refutation of this statement, for he long survived his twenty-five adventurous years of wandering among the Superstition Mountains and so, too, have hundreds of other searchers. It would appear to be a fact, however, that during the past fifty years about a score of people have died while looking for the source of Waltz's gold, some of them in mysterious circumstances. One of the most recent victims was James A. Cravey, who had himself flown into the mountains by helicopter in 1947. He was later reported to be missing, and his headless skeleton was found in the following year.

*John Chewning*

Joe Dearing informed Chewning that there was a catch in finding the mine: 'You have to go through a hole.'

*Maria Rables*

When asked to give an account of her journey to the mine, she spoke of going up a steep trail past a peak, which Bark and Ely recognised from her description as a route leading from the Bark valley by way of Miner's Needle. Thereafter, she and her companions continued northwards in the direction of La Barge Canyon. A trio of peaks could be seen in the distance, the most distant of the three being the one in the middle. Her questioners believed these peaks to be those marking the summit of a long arm which extends to the north-west from Tortilla Mountain.

From this it is evident that the mine could be approached from at least two different directions—from the north as well as from the south. Admittedly, it is possible that some of the testimony, if not deliberately intended to mislead, may have been wrongly interpreted by those to whom it was repeated. But it would be flouting the laws of probability to suppose that this could apply to the whole of the information, or even to the greater part of it, coming, as it did, from so many different sources. And while it is true that none of the indications, taken by itself, provides the answer to the problem of the exact whereabouts of the mine, considered collectively they may well point the way to some discerning investigator of the future.

In the meantime, by no means all the evidence is of a purely verbal nature, for more than one map has appeared on the scene, if only fleetingly. The drawing possessed by Panknin may be dismissed as being of dubious value, if only because it failed to lead its owner to the gold. But, several years before the arrival of the stranger from Alaska, there was revealed the existence of a document which promised to be of the utmost value to those engaged in the search: the piece of inscribed rawhide which had been entrusted to his rescuer by the dying Weiser.

It was not until 1911 that Bark and Ely learned of the existence of this map. Previously, their knowledge, for the most part acquired through Bark's early talks with Reiney Petrasch and as a result of the many conversations both of them had with Helena Thomas, mainly concerned Jacob Waltz. Bark, incidentally, had

met Waltz, who died believing that Weiser had been killed by Apaches (as indeed he had), but without knowing that his mortally wounded partner had lived long enough to tell his story to Dr. Walker. This fact did not come to light until forty years later, when it was made known to Ely by Thomas F. Weedin, then Editor of the *Florence Blade*. At this time Ely was a newspaper man himself, and Weedin's call at his office was for the purpose of enlisting the support of a fellow journalist in a forthcoming political campaign.



FIG. 7. Contour map of the Superstition Mountains, Arizona, showing the location of the Bark Ranch and Weaver's Needle. (Based on the Arizona, Florence Quadrangle, Geological Survey of the U.S. Department of the Interior.)

Weedin, it transpired, had known Dr. Walker well and had frequently visited him at his house on the Pima reservation. One day the conversation somehow turned to the subject of mines and, during it, the doctor went to a locked drawer, from which he produced a flat package. This he opened to reveal a piece of rawhide, on which was drawn a map, and he then recounted the story of his meeting with Jacob Weiser. From the fact that, in the course of ten years he had made no attempt to investigate the dying man's claim that the map would lead him to a plentiful supply of gold, it

was evident that Dr. Walker had no particular interest in the matter, and this was confirmed when he declined Weedin's suggestion that the two of them should engage in a search for the mine. However, he had readily agreed to his friend borrowing the map in order to make a copy of it, and Ely was electrified to hear Weedin say that the tracing was still somewhere among his papers at home and that his listener was welcome to a sight of it.

But a fortnight or so later the expectant Ely received a note from Weedin saying that a preliminary search had failed to produce his copy of the map. He added that his wife had suggested that possibly he had given the drawing to some prospector or other and then forgotten the incident, but he was certain that this was not the case, and promised to have another look for the document. In the event, it was not found, and Ely subsequently learned from Weedin's daughter the probable reason why. It was her firm conviction that, in order to prevent her father from risking his life by venturing into what, at the time, was dangerous Apache country, her mother had secretly destroyed the missing tracing.

As for the original of the map, this, too, had vanished. Not long after his encounter with Weiser, Dr. Walker entered into what some of the more orthodox of his neighbours regarded as a state of unholy matrimony by marrying an Indian girl in accordance with tribal rites. His wife later died, though not before presenting him with a daughter, Juana, and when Dr. Walker followed the girl's mother to the grave (in the 1890s) he was found to have died without making a valid will. A probate court awarded his considerable estate to Juana, but the decision was contested by members of the Walker family, to such effect that the ruling was reversed, on the grounds that the marriage was invalid and the daughter illegitimate. And in the course of this uncharitable wrangling the precious rawhide map disappeared without trace.

But all was not lost, if the recollections of Thomas Weedin could be relied upon, for he professed to remember following the course of a line on the map which ran from the Mexican border to Tucson, whereafter it continued northwards until the Gila River was reached, which waterway it crossed at the well-known Two Buttes (North and South), between which the river flows. The line then bore leftwards (*i.e.*, in a north-westerly direction) until it ran into a valley which led to the Superstition Mountains and there entered a canyon which drained to the north-west and into a river. The way into the mountains Weedin identified as the Bark Valley (the obvious approach for anyone coming from the south), the

route to the canyon he considered to be the trail running past Miner's Needle, while the river could not be other than the Salt, formed by a union of the Black and White Rivers in the Mogollen Mountains and itself a tributary of the Gila River. As for the line, this came to an end, not in the canyon aforementioned, but in a subsidiary ravine which branched into the main gorge from the east.

Despite their extensive knowledge of the mountains, Bark and Ely were not able to identify the two canyons concerned. They also failed, it would seem, to pursue the matter to the extent of journeying to Mexico in the expectation that other copies of the map relating to the family mine would still be held by one or more of the Peralta descendants. One such document, however, was subsequently presented by Mexican friends to a Dr. Erwin C. Ruth, an American veterinarian in government employ, who had occasion to cross the border on official business in 1913 or thereabouts.

The matter was ultimately followed up by Adolph Ruth, the recipient's father who, in 1931, drove from Washington to Arizona. In response to enquiries made locally he was directed to the Bark Ranch, which had been acquired by W. A. Barkley. In the presence of the owner and of several other men who were either employees or prospectors, Ruth spoke openly about his plans, making no secret of his being the possessor of a map, provided by a Peralta relative, which purported to show the location of the old family mine. He asked to be guided to a distinctive peak (at once identified from his description as Weaver's Needle) and, as Barkley had other work to attend to, the prospectors saw the visitor safely into the mountains, leaving him camped beside a water-hole in West Boulder Canyon, less than 2 miles from his stipulated landmark.

Apart from his murderer, they were the last people known to have seen Ruth alive and, thanks to the wild nature of the surrounding terrain, it was six months before the fate of the missing man could be ascertained. His skull, exhibiting two bullet holes and identified by the victim's dentist, was first found. Subsequent search brought to light the rest of the skeleton, together with clothes and other belongings. There was no sign of the map, but a notebook contained some writing. It read:

*It lies within an imaginary circle whose diameter is not more than five miles, and whose centre is marked by the Weaver Needle, about 2,500 feet high—among a confusion of lesser peaks and mountainous masses of basaltic rock.*

*The first gorge on the south side from the west end of the range—they found a monumental trail which led them northward over a lofty ridge, thence downward past Sombrero Butte, into a long canyon running north, and finally to a tributary canyon very deep and rocky and densely wooded with a continuous thicket of scrub oak.*

*Veni, vidi, vici.*

The enigmatic nature of these directions, with their reference to both Weaver's Needle and Sombrero Butte, may be gathered from the fact that they appeared to convey nothing to Sims Ely. No less puzzling is the question of the significance of the concluding Latin phrase, 'I came, I saw, I conquered.' Is it to be supposed from this that, before he met his death, Adolph Ruth had discovered the long-lost source of the Peralta gold? If so, will his perplexing instructions, if interpreted aright, lead others to it? And is the secret, meanwhile, in the possession of the killer?

## CHAPTER SEVEN

### DIAMONDS BY THE TON

*Proposition: That in Africa, untold wealth awaits the discoverer of the source of the alluvial diamonds strewn along the beds of ancient rivers and seas.*

#### I

MORE THAN six hundred years ago Marco Polo described a remote valley, its floor tantalisingly bestrewn with an abundance of diamonds, which could not be closely approached because of high and precipitous cliffs which enclosed it on all sides. Not to be outdone, however, the people thereabouts had evolved an ingenious method of acquiring some of the riches which lay so invitingly out of their reach. Over the cliff edge they hurled large pieces of fresh meat, in pursuit of which delicacy a number of white eagles were wont to swoop. And, no sooner was one of the birds seen to emerge from the chasm with some of the bait in its clutches, than look-outs would so alarm it with their shouts whenever it essayed to settle that it would ultimately let fall its intended meal, and so permit the watchers to retrieve any diamonds which had attached themselves to it.

This extravagant tale, which bears a remarkable resemblance to the account of the second of the maritime adventures of one Sinbad the Sailor (minus, it is true, such zoological improbabilities as the fabulous roc and the outsize serpents capable of swallowing elephants), serves to illustrate the lengths to which men have long been prepared to go, at any rate in the popular imagination, in order to acquire wealth in one of its most concentrated forms. And although diamond of the highest grade, weight for weight, to-day commands a price which is several times lower than that of the finest quality emerald (a much rarer mineral), as a precious stone it nevertheless stands apart. Not only is diamond the hardest substance known, thereby exhibiting to a superlative degree the requirement that a jewel should be capable of being worn without deterioration, but it is the only gem which is composed of a single element. Whereas ruby and sapphire, for example, consist essentially of a colourless compound of aluminium and oxygen (corundum, or alumina) and owe the distinctive coloration for which

they are so highly prized to contaminative traces of various metallic oxides, diamond is simply crystallised carbon and is valued in accordance with the extent to which it approaches that standard of unblemished whiteness which betokens a complete *absence* of impurities. Moreover, thanks to the work of A. V. L. Verneuil and of other investigators before him, such as M. A. A. Gaudin, S. C. Deville and H. Caron, gem corundum, if anything superior in quality to the natural product, is now made artificially by the ton, whereas all attempts to create synthetic diamonds of gem proportions have so far failed.

Until the 17th century the composition of the diamond was unknown and the stone was generally held to be incombustible. This widespread belief was in due course disproved by the Florentine Academicians, who (at the expense of the obliging Tuscan Duke Cosimo) succeeded in showing that the stone could be made to burn. The French chemist, A. L. Lavoisier, then demonstrated that the product of combustion was carbon dioxide and, later, Smithson Tennant proved that diamond could not be other than an allotropic modification of commonplace carbon. Even so, the artificial production of diamonds turned out to be unexpectedly difficult.

Usually, an element can be obtained in crystalline form either by slowly cooling it when in the molten state or by deposition from solution. Carbon, however, normally volatilises without melting when it is heated, though it can be made to liquefy under suitable pressures. But the liquid, alas, is inconsiderate enough to solidify, not to diamond, but to yet another allotropic modification—graphite. Nor is carbon affected by ordinary solvents, though it dissolves appreciably in molten iron and, in 1894, Henri Moissan conducted a now famous experiment in which he attempted to utilise this property. A piece of comparatively pure iron was packed with sugar charcoal in a carbon crucible and the mixture heated between the poles of an electric arc. At a temperature of 4,000 degrees Centigrade, when the iron was volatilising in clouds, the crucible and its contents were suddenly cooled by being plunged into molten lead. Enormous pressures were thus generated within the mass of iron, from which it was anticipated that the dissolved carbon would separate in crystalline form, *i.e.*, as diamond. The claim that microscopic carbon crystals were in fact obtained, though accepted for many years, has since been questioned. It has been suggested that what the experimenter actually produced was merely a collection of carbides.

In Scotland, J. B. Hannay had earlier adopted a somewhat different approach to the problem. He sealed paraffin, bone oil and metallic lithium in iron tubes and then subjected the mixture to a dull red-heat. The process was not without its dangers, but, in the tubes which did not burst, a reaction developed whereby the hydrogen content of the oils combined with the lithium, leaving the carbon free to crystallise under great pressure. There has since been much controversy as to whether or not Hannay succeeded in his aims, and the question still remains a matter of dispute. In the meantime, the General Electric Company of America announced in 1955 that, after prolonged experimentation, their efforts to produce man-made diamonds had been successful. By means of a process involving high temperature and super pressure, minute crystals were produced which X-ray, hardness and other tests had unquestionably shown to be diamonds. The largest of the crystals measured one-sixteenth of an inch in its longest dimension and, though they gave promise of being industrially useful (e.g., for coating grinding wheels), it will be clear that the mass production of gem stones in the laboratory, let alone in the factory, is still far from having been achieved.\*

A full appreciation of the unusual qualities of the diamond belongs to comparatively modern times. Louis van Berguen, a citizen of Bruges, is credited with having discovered the art of shaping and polishing diamonds in 1475 or thereabouts, but it was not until the beginning of the 17th century that the Venetian, Vincenzo Peruzzi, devised the aptly termed brilliant cut, whereby the fire and beauty of the stone were at last revealed. This cut, also associated with the name of Cardinal Mazarin, resembles a double pyramid, the upper half of which is truncated so as to form a table surrounded by smaller facets. The single-cut brilliant has a square table and thirty-eight facets, and the double-cut an octagonal table and fifty-eight facets. In the modern so-called cutting process there are at least four stages in the conversion of a rough stone into a gem—cleaving, sawing, shaping and polishing.

\* In response to a series of questions, J. T. Elovich, of the Metallurgical Products Department of the General Electric Company in Detroit, obligingly replied as follows (private communication, 31 March, 1959):

1. *No—we have not produced gem stones.*
2. *No—we do not anticipate producing gem stones in the future.*
3. *No details of our production process are available for publication.*

It has since been announced by De Beers Consolidated Mines that the production of synthetic diamonds (likewise in the form of an abrasive grit) has also been achieved by members of a team working at the Adamant Research Laboratory in Johannesburg.

But, before this development took place, the diamond had long been prized for its rarity and its permanence, if not for its appearance. As to this, although the simplest form of a diamond crystal is an octahedron, complex modifications often give rise to a multiplicity of tiny faces which give it a distinctly rounded appearance. Also characteristic is a surface lustre, while the stones frequently have a peculiar greasy appearance, though on occasion they are both clear and transparent. In either case, the crystals are usually quite small, their weight, on average, being considerably less than one-hundredth part of an ounce. But outsize specimens are occasionally encountered, the largest yet found being the Cullinan, recovered from the Premier Mine, in the Transvaal. It measured 4 inches by 2½ inches by 2 inches and weighed about 1½ pounds!

From the evidence presented by a large cleavage surface, it appeared that the Cullinan was but part of an even bigger stone and, ever since its discovery in 1905, rumours have been circulating about the fate of the missing piece, all based on the assumption that it was somehow smuggled out of the mine. According to one account, it was stolen by a native named Johannes Paulus, whereafter it turned up in the possession of a resident of Louis Trichard, who is said to have hammered a piece off the stone (reputedly worth £1,000,000!) and presented it to his landlady in lieu of rent! No less colourful is the story of the farmer from Pretoria, who learned that a native possessor of the diamond was prepared to sell it for £1,000 in gold coin. The indigent, but resourceful, farmer filled a bag with lead washers, placed some sovereigns on top of them and went to keep his appointment. But the deception was discovered, whereupon the vendor vanished, taking the stone with him, and it was last heard of in 1928, when its reported owner was one Andries Molife, a dark-skinned citizen of Krugersdorp.

It is perhaps unnecessary to add that there is no evidence to substantiate any of these highly improbable tales. Careful examination of the Cullinan stone, moreover, suggested that the cleavage may have occurred as long as half a million years ago, in which event the missing portion was likely to be represented by a multitude of small pieces, having regard to the fact that mined (as opposed to water-worn) diamonds sometimes explode on being released from the depths of the earth, evidence of enormous stresses within.

Despite an often dull and uninteresting appearance, to those who have handled uncut diamonds, the stones are unmistakable, and there is reason to believe that they were in all probability first

discovered in Central India several thousand years ago. Here, ancient workings were later established in the neighbourhood of the Kistna, Pennar and Godavari Rivers, where a now ruined city, not far from Hyderabad, became the industry's recognised trading centre and its name—Golconda—synonymous with illimitable wealth.

Some of the most famous of the Indian stones were among the treasures plundered by the Persian leader, Nadir Shah, when he sacked Delhi in 1739, including the Koh-i-noor (which thereafter passed through many hands until it finally reached those of Queen Victoria), the Orlof (said originally to have been one of the eyes of a Hindu idol) and the Great Mogul (which was seen by J. B. Tavernier at the court of the Indian Emperor Aurangzeb in 1666 and has since vanished without trace). Another outsize stone observed by the Frenchman, which has likewise disappeared, is that known as the Great Table, while the Shah diamond has a claim to fame as the bauble which was handed over to Czar Nicolas I by Prince Khosrau of Persia as compensation for the murder of a Russian ambassador. No less bloodthirsty is the history of the Sancy diamond, so-called after Nicolas Harley de Sancy, a Huguenot nobleman into whose possession it ultimately came. At the request, it is said, of Henry III of France, the stone was despatched to Switzerland as a pledge for the payment of a body of mercenaries. But the messenger was set upon *en route*, though he managed to swallow the gem before he died, as its joyful owner discovered when, on the off chance, he ordered his faithful servant's stomach to be slit open. . . .

It has been suggested that the diamond was introduced into Europe by Alexander the Great on his return from his invasion of India in 327 B.C. and that from Greece the stone made its way to Rome, where it found use, not so much as an ornament as an engraving tool. According to Pliny the Elder, it was also highly esteemed for its supposed ability to render all poisons harmless, to drive away madness, to disperse night spirits, to ward off evil dreams and to protect the imbiber of wine or water into which it had been dipped from apoplexy, jaundice and gout. It also achieved a more lasting renown as the *pietra della reconciliazione*, as the peacemaker between husband and wife. But the real magic of the stone—that diamond would cut diamond—was not discovered until the 15th century, and this revelation, coupled with the stories subsequently related by Tavernier and other travellers returned from the East, of the magnificent diamonds owned by Oriental

potentates, led to a gradual appreciation of the gem's aesthetic qualities and to a desire among those of wealth and position to possess it.

At the beginning of the 18th century India was still the sole provider of the world's diamonds and, as her supplies were then showing signs of exhaustion, the gem remained rare and costly. But in 1721, what were to prove to be immensely rich fields were found at Tejuco (now Diamantia) in the State of Minas Geraes, Brazil—some of the local inhabitants had actually been using the stones as counters in their card games! The area was forthwith declared a royal monopoly (on behalf of Portugal's profligate King, John V) and, up till 1771, more than one and a half million stones are known to have been mined. But as there was at first no check on production and considerable digging, illicit and otherwise, was done outside the royal preserve, not to mention much smuggling of stones from within it, the total number of diamonds which were extracted during the colonial period will never be known.

So great was the Brazilian output, however, that not only did it bring ruination to the Indian mines, but a world-wide depreciation of diamond values was threatened—a menace which hangs over the industry still, and one which was encountered then, as it continues to be averted now, by stringent measures designed to check over-production.

## II

Brazil enjoyed a near monopoly as the world's supplier of diamonds until after 1866, in which year, in the Hopetown district of South Africa, a farmer named Schalk van Niekerk chanced to admire a pebble which some children had been using as a plaything. The stone had been found on the De Kalk farm of Daniel Jacobs by his fifteen-year old son, Erasmus, whose mother made van Niekerk a present of it.

Although the existence of diamonds in South Africa had been asserted long before this on a number of occasions (according to F. Boyle,<sup>16</sup> the words 'Here lie diamonds' are to be seen scrawled across the territory of what is now Griqualand West on a mission map of 1750), leading geologists had for years expressed the opinion that Africa could be expected to provide little in the way of such gems, it being argued in support of this view that the conditions there differed so widely from those which existed in India and Brazil. Nevertheless, the stone so lightly bestowed upon van Niekerk, who disposed of it through a trader named Jack O'Reilly,

proved to be a diamond of 20 carats,\* and it was promptly purchased by Sir Philip Wodehouse, Governor of the Cape, for £500! But the story that the two beneficiaries at once gave half of this sum to the Jacobs family, though it subsequently found its way into print, has since been authoritatively denied. According to a statement recently publicised by Eric Rosenthal,<sup>117</sup> in 1932 Erasmus Stephanus Jacobs, then eighty-one years old, signed an official declaration, duly witnessed by the Town Clerk of Kimberley, to the effect that neither he nor any other member of his family had received so much as a farthing from either of the two men.

Van Niekerk, meanwhile, his appetite whetted by the success of this first transaction, searched for, and eventually obtained, an even larger stone, for which he paid its native owner the equivalent of £250—1 horse, 10 oxen and 500 sheep. This new acquisition proved to be a diamond of more than 80 carats, which was promptly sold for £11,200. After cutting, the stone was bought by the Earl of Dudley for £25,000, since when it has achieved renown as the Star of South Africa.

As a result of these startling discoveries, a full-scale diamond rush developed, and soon more than 10,000 prospectors of all nationalities had established themselves along both banks of the Vaal River. Harry Emanuel, of a London diamond firm, sent out J. R. Gregory, a professional geologist, to report on the situation. Gregory examined the surrounding veldt, found that it was not diamondiferous, suggested that the few stones which had been found had reached the locality in the crops of wandering ostriches, and thereby deprived his sponsor of the chance of making a fortune. For within a year an abundance of fine stones was found at Klipdrift (modern Barkly West) and elsewhere.

Thus far, the African discoveries, though surprising enough

\* The term *carat* is derived from the locust or carob tree (*Ceratonia Siliqua*), the seeds of which are remarkably constant in size and were formerly used as a weight by the diamond merchants of India. Elsewhere, the value of the carat has varied greatly, not only from place to place but also from time to time. At the meeting of the International Committee of Weights and Measures which was held in Paris in 1907 a Metric Carat was adopted, equal to one-fifth of a gram, i.e., 200 milligrams—though the indescribable confusion to be found among 19th-century and earlier records of course remains.

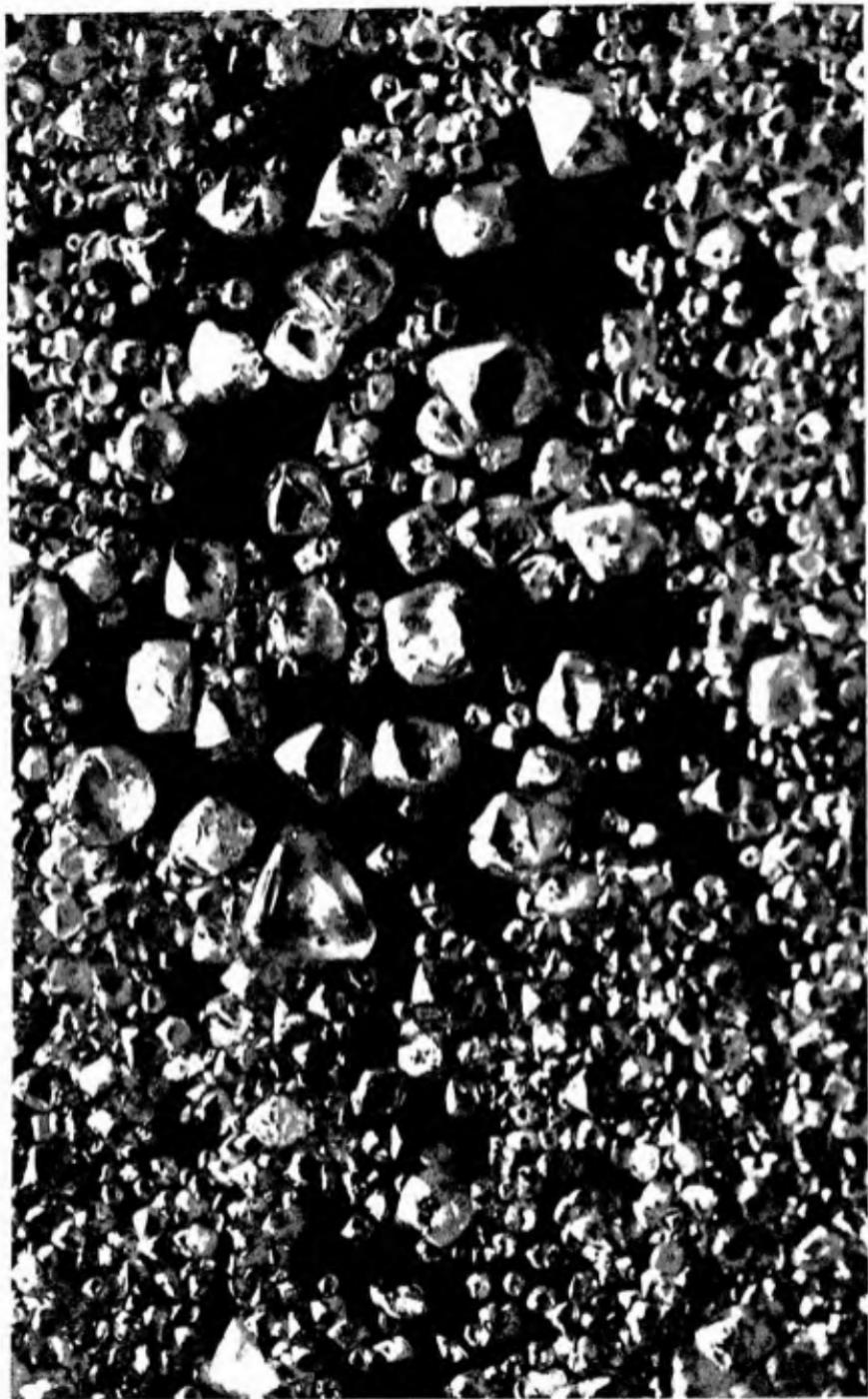
As a matter of interest, it may be noted in passing that the value of a 2-carat diamond is not twice that of a 1-carat specimen of comparable quality. From 1750 onwards, value was for more than a century based on the *square* of the weight, so that the worth of a 2-carat stone was estimated to be four times that of one half as heavy. This mode of reckoning has since been considerably modified, and unusually large stones now tend to be priced in terms of what they will fetch.



Prospecting trenches at the diamond coast, South West Africa



The Williamson Diamond Mine at Mwadui, Tanganyika Territory



Gem stones from the beaches of South West Africa

according to the geology of the day, had at least not run counter to the long-established belief that diamonds were to be found only as alluvial deposits among the gravels of river beds. But even this cherished notion was soon to be upset. In 1870 Jaap de Klerk, foreman of the widow, Jacoba Visser, found a diamond on her farm, Jagersfontein, situated 100 miles to the south of the Vaal, whereupon some of the less successful of the diggers also began to try their luck away from the river. A succession of so-called dry diggings was in this way established on other nearby farms—Du Toit's Pan (Dutoitspan), Bulfontein, Vooruitzicht (the property of the brothers Johannes Nicolas and Diederick Arnoldus de Beer) and Colesburg Kopje, better known as Kimberley, in commemoration of the then British Colonial Secretary.

These unprecedented discoveries were all made within a few miles of one another, and in each case the diamondiferous earth was confined to the area of a shallow depression or pan, either approximately circular or roughly oval in shape and some 200–300 yards across. Stranger still, as the work of excavation proceeded, it became evident that the various depressions marked the mouths of vertical tubes or pipes, wherein seemingly inexhaustible supplies of diamonds were to be found in depth!

This, as may be imagined, came as a heart-rending discovery to those landowners who had disposed of their holdings for sums which, though seemingly remunerative enough at the time, appeared trivial indeed in the light of subsequent events. Thus the de Beer brothers, who had purchased their farm from the Orange Free State Government for £50, had no misgivings about selling it to a Port Elizabeth syndicate for £6,000. Similarly, Adriaan van Wyk, who had paid merely a nominal sum for the farm of Du Toit, hastened to dispose of it, after finding several small diamonds in the mud with which the homestead was plastered, for the highly inflated figure of £2,500. Such was the enormous price paid for the Dutoitspan Mine, which property, following a period of sensationaly profitable working, and after being closed down for a number of years, was recently re-opened to yield more than £3,000,000 worth of diamonds in 1950 alone!

No less spectacular is the history of the famous Kimberley Mine. It was discovered in July, 1871, by Fleetwood Rawstorne and covered some 38 acres—an area roughly circular in shape, with a circumference of nearly a mile. In the early days more than 1,500 individual claims cluttered the site, each measuring 30 × 30 Dutch feet (about 31 × 31 English feet). It was traversed by a

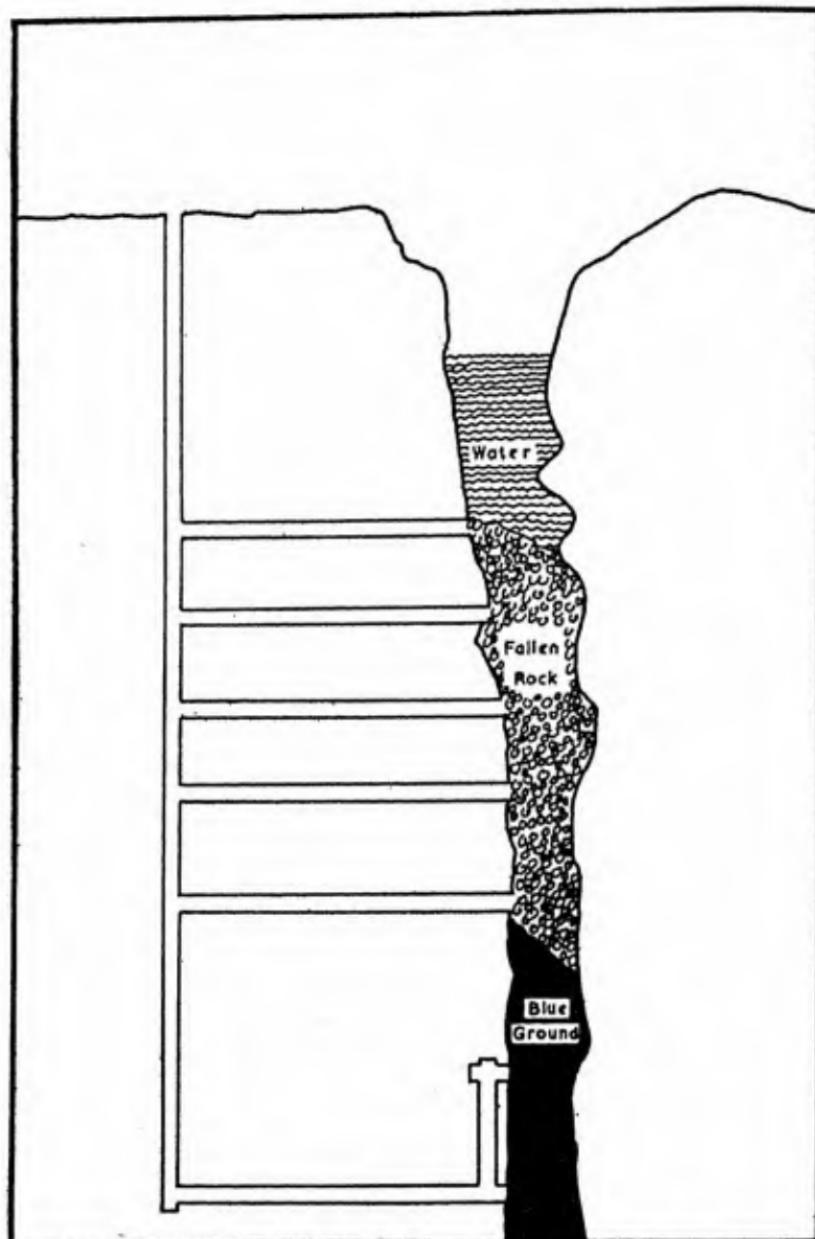


FIG. 8. Section of the volcanic pipe at Kimberley, the blue-ground filling of which has yielded some 3 tons of diamonds. Because of the danger from falling rocks, open-cast methods had to be abandoned at a depth of 1,200 feet. The adjacent shaft descends to a depth of some 3,600 feet.

dozen or so roadways, running from east to west and, as the intervening earth was dug out, differences in adjacent levels arose, so that conditions became chaotic and dangerous. Ultimately and inevitably, there came about an amalgamation of the many conflicting interests but, even so, open-cast methods had to be abandoned at a depth of 1,200 feet because of the ever-increasing risks from falling rock. Work was then continued from an adjacent shaft for another 2,400 feet or so, making some 3,600 feet in all. From this stupendous excavation, the biggest man-made hole in the world, more than 20,000,000 tons of filling were removed, from which about 3 tons of diamonds were extracted.

The finding of diamond in circumstances so unusual and in quantities so unprecedented led to a rapid revision of existing ideas concerning the mode of formation of the mineral and of the manner in which it had come to be distributed on the surface of the earth. The ancients had firmly believed that the white stones so conveniently to be found in the shallows of Indian rivers had actually been formed *in situ* and that a new crop of mature gems might reasonably be expected to make an appearance every twenty years or so. Nineteenth-century geologists, while not so readily subscribing to this hopeful expectation, nevertheless inclined to the view that diamonds, being composed entirely of carbon, were of vegetable origin and deposited from water holding certain organic compounds in solution. But, in this event, how was their presence in the unplumbed depths of the Kimberley and other African pipes to be explained?

Examination of the material which filled these tubular fissures disclosed that, immediately below the loose surface deposit, the ground was of a yellowish colour and fairly easy to work. At a depth of 50 feet or so, however, the earth assumed a bluish tinge and exhibited a rock-hard consistency. Thanks to the widespread belief that rivers were the source of diamonds, it was at first supposed that the gems had been deposited in these unusual cavities by the action of streams which had long since vanished. And it was also mistakenly believed that, when the yellow earth came to an end, so would the supply of precious stones.

Some diggers, on reaching the blue ground, cunningly covered up this tell-tale indication with a layer of the yellow material and then disposed of what they imagined to be their worthless holdings to unsuspecting newcomers. It was not the rogues, however, but their intended victims, who benefited from the deception for, in 1876, a conclusion of the utmost importance was reached by Dr.

W. Guybon Atherstone, of Grahamstown. He reasoned that, since the yellow ground was clearly not alluvial, it must be volcanic, in which event the diamonds it contained must have come from the depths of the earth. But if this were so, the blue ground should also contain carbon crystals—as indeed proved to be the case. The so-called yellow ground was, in fact, merely blue ground which had become friable through oxidation!

The distinctive blue ground, a volcanic tuff to which the name Kimberlite has been given, proved to be a fragmented rock containing such minerals as mica, garnet, corundum—and diamond. In the richest parts of the Kimberley Mine the last-named was present to the extent of one part in two millions, though the overall yield was appreciably less, while the average figure for South African mines generally is as low as one part in thirty-five millions. A common origin has been ascribed to all these Kimberlite-containing fissures, in that it is believed they have resulted from the sudden generation of tremendous steam pressures deep underground. This led to the punching of escape vents through the intervening terrain and to the ejection of material from the bowels of the earth—a phenomenon which, there is evidence to suggest, occurred during the Upper Cretaceous period. The supposition thus is that in days long gone by, before the existence of the pipes was known or even suspected, diamonds had been found among the river gravels of the world because, at some time or other during the past sixty or more million years, rushing waters had passed over the mouths of a number of these vents and carried away the topmost layers of their contents.

Early supporters of the revolutionary theory that the diamond was of igneous origin were not slow to perceive its wider implications. With due reservations (of which more anon) a river such as the Vaal, if followed upstream, should point the way to the location of the volcanic pipe which was the source, or one of the sources, of the diamonds which now bestrewed its bed. And, on the other hand, if followed downstream it might be expected to lead to considerable accumulations of gem stones which had piled up at strategic places in the course of the years.

An early attempt to demonstrate the worth of such ideas was made by Fabian Cox, a Rand engineer. He subscribed to the notion that a particularly deep hole in the Vaal River bed ought to be a likely spot in which to find diamonds, on the theory that any stones washed into such a cavity would settle to the bottom of it and there tend to remain. To put the matter to the test, the site of a

70-foot deep underwater chasm was located and a large and specially constructed caisson was manoeuvred into position over it. Disappointingly, few diamonds were recovered, however, and in the end the caisson was accidentally lost, whereupon the project was abandoned.

As for the suggestion that rich diamond fields awaited a discoverer much farther downstream, this turned out to be a belief which it was far easier to entertain than to prove. The Vaal is one of the two chief tributaries of the Orange River, and its waters mingle with those of the parent stream at Mazelsfontein, located at a point almost equi-distant from the two widely separated diamondiferous areas of Barkly West (on the Vaal) and Hopetown (on the Orange). But beyond Mazelsfontein increasingly sterile country is encountered, until there is reached the wild and inhospitable region of the Augrabies Falls, discovered by George Thompson in 1824. At this remote and desolate spot the waters of the mile-wide Orange River enter a narrow channel, self-worn in the surrounding granite and, thus confined, hurl themselves with enormous velocity over a precipice, cascading and falling for more than 600 feet into an abyss, there to become lost for the next 7 miles in a succession of gloomy canyons.

For many years men searched in this wild and desolate region, especially among the neighbouring Noup Hills below the Falls, for a rumoured valley, said to be overflowing with diamonds and referred to by the nomads of the adjacent Kalahari Desert as the 'Place of the Great Glitter'. According to H. A. Bryden,<sup>18</sup> at least one white man is supposed to have been there, an English prospector who was taken to it in the 1870s by his Bushman guide. To reach the place, so one of the several versions of the story goes, the two men first entered a forbidding mountain range, making their way northwards until further progress was barred by a high cliff. Here, however, a river flowed into a cave and, under the Bushman's direction, rafts were constructed on which they floated into the bat-infested blackness ahead. Water snakes, too, were there to dispute their passage until, after a long and hazardous journey, a point of light in the distance and the muffled roar of falling water signalled that the time had come to disembark. Now on foot, they crept to the cave's other mouth, located high up the steep walls of a valley, and beheld the waters of the river pouring over its edge. The valley floor, down to which they climbed, was littered with diamonds and, after taking his pick, the prospector announced his readiness to depart. A return by the way they had come was out

of the question, but the Bushman pointed to a barely perceptible path which took them up the canyon wall and back into the mountains, where the guide was attacked and killed by a leopard. His companion was thus left to find his way alone, and lived to tell his tale only after enduring many hardships and nearly dying of thirst.

Hardly less improbable is the once popular idea that if the waters of the Orange above the Augrabies Falls could be dammed or diverted, diamonds by the cartload would be discovered at the foot of the drop. But such evidence as is available lends little support to this notion. At places along the river bank, where a series of large potholes has been formed by the action of rocks swirled around by the strong current, stones, worn round and smooth, have been found at the bottom of the holes. None of them proved to be a diamond, however, and it is held by informed opinion that any gems washed over the crater-like lip of the Falls would have little opportunity to linger in the boiling-pot at the foot, but would be swept out and along by the rushing waters. Seemingly, the logical place to search for diamonds lay still farther downstream.

### III

Some three hundred miles beyond the Falls the Orange River debouches into the Atlantic at Alexander Bay, located in the midst of a desert wasteland which stretches for hundreds of miles along this section of Africa's western coast. Because of its inhospitable nature and insignificant rainfall (a fraction of an inch per annum), little interest was shown at first in this stretch of desert shoreline by intruding Europeans; and Portuguese explorers who visited it in the 15th century preferred to settle in Angola to the north. Dutch settlers established themselves far to the south in 1652, and were subsequently dispossessed by the British, but it was not until 1876 that the Cape Government sought to extend its influence along the west coast by concluding treaties with native chiefs as far north as the frontier of Angola.

This progressive policy, however, was disavowed by the unimaginative authorities in England, with the result that, in 1883, an interested German Government formally enquired of Great Britain whether she professed to exercise any jurisdiction north of the Orange River. The reply from London was evasive, whereupon F. A. E. Luderitz, a Bremen merchant, purchased from local

natives a tract of land containing the well-sheltered harbour of Angra Pequena (earlier so-called by its Portuguese discoverers), where he raised the German flag. In the circumstances the loud protests which then emanated from London were as uncalled for as they were belated and, to add to the mortification of those responsible for the loss of the territory, it was from this hitherto despised and neglected stretch of the African coast that the first whispers of fabulous finds of diamonds came. Among other things, the rumours told of the *Diamantberg*, a veritable mountain of diamonds, the story of which was inspired, no doubt, by the discovery at Pomona of the now famous Jewel Box, called by the Germans *Hexen Kessel* (Witches Cauldron), a diamond-studded gravel patch so rich and inviting that it was kept constantly under an armed guard.

At first, however, the outside world was not inclined to pay any heed to such tales, as a number of luckless Kaffirs, who had been employed by the Germans on railway construction and who afterwards made their way to Cape Town, learned to their cost. Some of these native workers had earlier been to Kimberley and so knew a diamond when they saw one. But when they attempted to dispose of the stones which they had picked up near Luderitz they were promptly jailed by the Cape authorities under the provisions of the I.D.B. (Illicit Diamond Buying) Act: no one would credit their story that the stones had been acquired in German South-west Africa!

Nor were natives the only victims of this incredulity. The aforementioned Eric Rosenthal<sup>116</sup> has related how his father, a resident of Cape Town, was acquainted with a lone prospector whose name was Hans Sieg. One day in 1903 Sieg entered his office and produced a handful of small diamonds. But when he declared that they had been found in the wilds beyond the mouth of the Orange River no one would believe him—until five years later there came the news of the making of a dramatic discovery near Luderitz, at a spot which subsequently came to be known as Kolmanskop.

The stretch of railway built by the Germans ran from Luderitz to inland Aus, on the fringe of the waterless Nambib Desert, and the track required constant attention to keep it free of wind-blown sand. A permanent-way inspector, one August Stauch, had requested members of a maintenance gang to watch out for any unusual stones during their sand shovelling, and one day he was brought a number of small pebbles which examination showed to

be diamonds. He at once pegged claims, and these proved to be so promising that the discovery led to a diamond rush.\*

F. C. Cornell,<sup>32</sup> who spent most of his life prospecting in Africa, has described the scene as he found it when he reached Luderitz in 1911. The place was thronged with diamond hunters, most of them shady company promoters, bucket-shop experts, warned-off bookmakers and get-rich-quick merchants, sharpers of all sorts, including a sprinkling of absconding seamen in the guise of ex-cooks, one-time stewards and erstwhile stokers. As for the town itself, at that time it consisted of a forlorn collection of corrugated-iron huts, one of them claiming to be an hotel and another dignified by the name of Customs House. The streets were unspoiled desert, ankle deep in sand, and the first thing that caught the eye was the enormous number of empty beer and other bottles which everywhere lay piled in the utmost confusion. This, of course, merely reflected the prevailing lack of water, the supply of which, though supplemented by a condensing plant, had been short enough in pre-rush days, and which now commanded such fantastic prices that some enterprising individual was shipping it in by steamer from Cape Town.

A careful survey later showed that diamonds were to be found at intervals along a coastal strip up to 12 miles wide which stretched for a distance of nearly 300 miles, southwards from Conception Bay to Luderitz and beyond! At Bogenfels, however, 100 miles short of Alexander Bay, the diamond trail was lost, though prospecting was continued as far south as the Orange River, which at that time marked the boundary between German and British territory. In 1920, however, German mining interests in the region were acquired by the newly formed Consolidated Diamond Mines of South-West Africa Limited (a De Beers subsidiary), and eight years later diamond-bearing marine terraces were located by the Company within a few hundred yards of the prospecting pits so unavailingly dug by their predecessors!

Unlike earlier discoveries in the region, these ancient beaches, from which the sea had long ago receded, were found buried beneath as much as 30 feet of sand, an overburden which, of course, needed to be removed. In fact, experience showed that sand and gravel occupying something like 135,000,000 times the volume of the diamonds they shielded had to be dealt with in order to recover the gems—a figure four times that of the average for the material

\* Although Stauch became a very wealthy man, it availed him nothing in the end, for he perished miserably of starvation in Berlin in 1948.

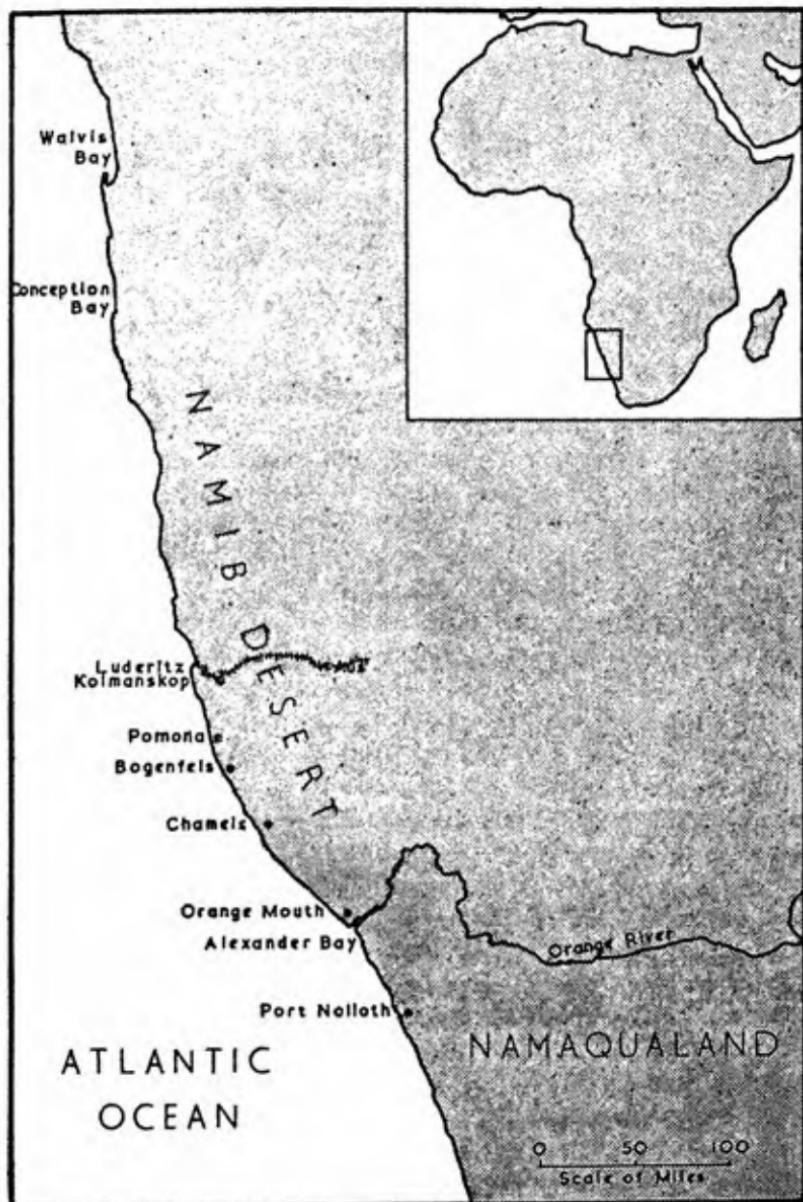


FIG. 9. The diamond beaches of South-West Africa, which stretch northwards from Port Nolloth to Conception Bay and beyond—a distance of more than 400 miles. The diamondiferous area is also shown (inset) in relation to the African continent as a whole.

in the volcanic pipes. On the other hand, the terraces stretch invitingly northwards from the Orange mouth, and in the first 25 miles alone it has been estimated that some 2,500,000 carats (about  $\frac{1}{2}$  ton) of gem stones are to be had for the taking!

Among early exponents of the River Theory, meanwhile, whose favourite pastime it was to speculate precisely what they would do if they were a diamond being swept along by the waters of the Orange, the conviction remained that countless numbers of the precious stones must have been swept down to the sea from pipes far inland and thereafter washed into Alexander Bay by the southward, inshore current, which cuts across the river mouth and into the Bay itself. Such speculation, as may be imagined, was revived by the Luderitz discoveries and, towards the end of 1909, two independent camel expeditions, one under a Dr. E. Reuning and the other led by a man named Klinghardt, met by chance at the river mouth after carrying out arduous exploratory journeyings. But, although unimaginable wealth lay at their feet, the two men failed to find it. It was missed, too, by the veteran prospector Fred Cornell, when a year or so later he landed at Port Nolloth, in Cape Province, on his way northwards along the wilderness of the Namaqualand coast. And in the end, it was two Port Nolloth men—Bill Carstens and his son Jacques—who made the first discovery in 1926, not at Alexander Bay, but at a point on the shore about 50 miles away, in the vicinity of Port Nolloth itself.

Some prospectors then made even more promising finds near by, at a place known as The Cliffs, where the desert makes a sharp descent to the sea; and yet other pioneers who braved the inhospitabilities of the region obstinately continued the search in the neighbourhood of the Orange River mouth, until one of their number was at last rewarded by his happening upon more than three hundred diamonds after a short period of digging. At this, a group of half a dozen Namaqualand men, headed by the brothers Israel and Julius Gordon, decided that the time had come to take a hand in the search and, at Springbok, the Namaqualand capital, a partnership was formed. Its six members then set out for Alexander Bay and, after setting up camp on arrival, a tentative exploration was begun. And almost at once, Theunis Coetzee, after casually plunging an arm into the sun-lit sands, withdrew it to find that he held a diamond in his hand! In the face of this favourable omen it was agreed that the venture looked sufficiently promising to warrant the purchasing of some equipment, and a mechanical sieve was accordingly placed on order.

News of the various Namaqualand finds, meanwhile, had prompted a number of London financiers to retain the services of Dr. Hans Merensky, who was instructed to sail to Africa with a view to making on-the-spot investigations. He was accompanied by Dr. Reuning and, on arrival, the two geologists at once made their way to the west coast. Here they journeyed from one claim to another, discussing finds, assessing possibilities and, where the prospects appeared to justify it, acquiring options. Eventually it was decided to go to the camp of the Gordon brothers, but their first attempt to reach the wilds of Alexander Bay was foiled by their having to turn back through lack of petrol. It was at this juncture, while they were taking stock of the situation at Springbok, that Israel Gordon arrived there in search of the machinery ordered by the partners, the delivery of which was still awaited.

The three men journeyed to Alexander Bay together, where the geologists soon satisfied themselves that a discovery of great potential richness had been made. A period of protracted bargaining then followed. The six partners at first demanded £20,000 for their claims. Merensky parried by endeavouring to obtain a six months' option in return for the payment of a nominal sum and a share of any profits. After much haggling, in the course of which an offer of £10,000 down and a half interest in the venture was refused, the Gordon brothers and their associates eventually accepted an offer which differed only in that the cash payment was increased to £17,500. But, although it seemed to the partners, at the time of their signing the agreement, that a fortune had been gained, before another six weeks had passed they were to realise that, in fact, a fortune had been thrown away. . . .

The London backers having declined to participate in the deal, Merensky set off for Johannesburg, where a syndicate was quickly formed to finance the enterprise. Dr. Reuning, meanwhile, remained at Alexander Bay and began a more careful examination of the area. Within a week, on a memorable day in mid-January, 1927, a region unbelievably rich in diamonds was located among a bed of fossil oyster shell and, at the end of a fortnight, a trial trench had yielded stones worth some £50,000. By 25 February, no less than 6,890 stones had been recovered, weighing 12,549 carats and valued at £150,000!

By this time the wildest rumours had begun to circulate, and the South African Government stepped in and forbade further prospecting in the region—except by its own accredited representatives. Subsequent investigation revealed the existence of diamond-

iferous, wave-cut terraces, at elevations of up to 200 feet above sea-level and as much as 3 miles inland, which stretched southwards along the coast for a distance of 200 miles. The richest area, however, was at Alexander Bay, in the shape of a strip of gravel up to 100 feet wide, the site of an ancient storm beach, located more than a mile from the present coastline and 120 feet or so above sea-level. Here the State Alluvial Diggings were established, and from this one stretch of gravel, diamonds to the value of £18,000,000 were recovered in the course of a single decade!

The Johannesburg syndicate, meanwhile, was allowed to work its Discoverer's Claims—twenty in all, covering an area of some 2,000 square yards. That the most was made by private enterprise of this unique opportunity would seem to be indicated by the fact that, in 1929, Dr. Merensky disposed of his interests there for £1,250, 000!

Among the many would-be miners who did not take at all kindly to official intervention in Namaqualand was a prospector named W. P. Thom who, towards the end of 1930, sought to circumvent the governmental ban by pegging an offshore claim. His action was immediately challenged by the authorities, but a ruling given by a sympathetic Springbok magistrate favoured the defendant, and it was declared that the Crown was empowered to alienate land only up to the high-water mark. This triumph, however, was of brief duration, for those who essayed to take advantage of the situation were promptly haled for trespass.\* And in 1936, in order to safeguard their interests still further, the Government announced that a coastal stretch, 60 miles long and 15 miles wide, was to be wired in and public access thereto denied. Thus it remains to this day—one of the richest areas in the world, where diamonds have been picked up from the ground by the handful, but which, alas, is patrolled night and day by fierce Alsatian dogs in charge of armed guards whose reputed inclination is to shoot first and enquire afterwards.

#### IV

In the face of these and other preventive measures, conditions can hardly be said unduly to favour the lone seeker after diamonds

\* There was an echo of the Thom case at Windhoek, the capital of the Territory of South-West Africa, in 1957, when Mr. Justice Claassen dismissed an application by Consolidated Diamond Mines for a declaration confirming its mining and prospecting rights between the high- and low-water mark along the length of coast from the Orange mouth to Luderitz. With millions of pounds worth of diamonds at stake, no doubt there will be a determined attempt to have the decision reversed.

to-day. Wherever he may choose to make his search, more likely than not he will find that, because of an over-riding governmental interest (with huge sums in taxation and export duties at stake) his proposed activities are regarded with suspicion and that legislative measures either seek to discourage him by surrounding the enterprise with burdensome conditions or, more simply, prohibit all private prospecting outright. Again, he will almost certainly find himself in direct competition with powerful vested interests, whose well-equipped teams of geologists are constantly engaged in making surveys, and who could hardly be expected to view with equanimity the prospect of the discovery of a rich new field by a newcomer, the uncontrolled output of stones from which would inevitably have a disturbing effect upon the market.

Nevertheless, and notwithstanding all the difficulties and the drawbacks, there would still appear to be ample opportunity for enterprising outsiders in the never-ending quest for diamonds. In Africa particularly, as a number of recent events have clearly shown, success awaits the owner of bold and imaginative ideas—and there is no monopoly of these. There has still to be located, for example, the source of the gem stones found along the banks of the Vaal and the Orange, an undertaking bedevilled by the fact that the existing river systems appear to bear little or no relation to those of earlier geological epochs. This is a complication which points to the existence of ancient and now dry river beds, some of which must contain areas of rich diamond-bearing gravel and whose course should provide a guide to the place whence the gem stones came. Assiduous in the search for these long-vanished waterways has been Dr. Harold Harger, who has succeeded in tracing not a few of them, and whose investigations led to the finding of the most prolific diamond deposit yet discovered. This was near Lichtenburg, in the western Transvaal where, in bygone ages, a stream chanced to flow over cherty limestone, the surface of which was plentifully endowed with potholes, in which depressions vast numbers of water-borne diamonds were caught. In 1926 their presence led to a rush reminiscent of the old days, and such was the productivity of the newly found field that, in the following year, the output of alluvial gem stones exceeded that of the mines for the first time.

Large numbers of the much sought-after volcanic pipes have also been discovered in the course of routine surveys. To date, no less than 150 have been located in the southern regions of Africa alone, spread over an area which embraces thirty degrees of lati-

tude, from Sutherland in Cape Province to Muranza in Tanganyika Territory. By no means all of them have proved to be rich in diamonds, however, and in many cases the blue earth filling was barren, or very nearly so. Only twenty-five of the pipes have so far been mined, and the bulk of production has come from eight of them, so that the chance of a newly found fissure proving to be a second Kimberley is not more than one in twenty.

At the surface the pipes give little indication of their existence, apart from an occasional slight depression or rise, so that the probability is that many more of them remain to be discovered. And that expert opinion in such matters is not always unreservedly to be accepted was amply demonstrated by the fabulous find made by the late Dr. John Thorburn Williamson, as recently as 1940. Against all advice and with little enough in the way of equipment or resources, this young Canadian geologist gave up a well-paid job with De Beers and set off alone into the wilds of Tanganyika to seek a mine of his own, obtaining a concession in an area which not long before a government-sponsored mission had declared to be valueless as regards mineral content.

Although diamonds were known to exist in the Territory and had been the object of intermittent mining operations during the preceding twenty years, no phenomenal results had been achieved. The forty or more Kimberlite pipes which had been located in the adjoining districts of Kahama, Singida, Kwindwa and Shinyanga were found to be relatively barren of diamonds, and the only payable deposits were confined to nearby gravel beds, production from which had been negligible for a number of years prior to Williamson's arrival on the scene. At that time the consensus of informed opinion was that Tanganyika was too far north to be other than on the fringe of the African diamond belt and the outlook for the newcomer appeared anything but promising. For many months he searched in vain and suffered considerable hardship in the process. But, on 6 March, 1940, at Mwadui, some 20 miles from Shinyanga township, he came upon the mouth of a pipe which has since been revealed to have a producing cross-sectional area of more than 400 acres—an area which is greater, that is to say, than those of all the operational South African pipes put together!

The phenomenal success of the venture, unique in that it was brought into being by one man who financed it wholly from retained profits, may be judged from the figures relating to diamond exports from Tanganyika Territory, which rose steadily from £12,598 in 1940 to £638,383 in 1945. In the course of the next

five years the mine's annual production neared the £2,000,000 mark—to the great concern and alarm of South African producers, for Williamson obstinately declined to sell out to them (for a sum reportedly said to amount to £20,000,000) or to join their marketing organisation. However, with the untimely death of its finder early in 1958, an interest in the mine was acquired by De Beers.

Thanks to the unprecedented Williamson discovery, prospecting for diamonds in Tanganyika Territory is now prohibited. But other promising regions remain—even within the bounds, but outside the jurisdiction of, South Africa itself. Thus the Protectorates of Swaziland, Bechuanaland and Basutoland, though geographically a part of the Union, are administered by a British High Commissioner and, in 1956, a prospector by the name of Jack Scott obtained from the paramount chief of Basutoland the exclusive right to prospect for diamonds in the territory. Although the region was generally regarded as unlikely to prove of interest, three years later De Beers announced that, subject to the approval of the authorities concerned, they had negotiated an agreement with Scott, whereby an interest would be acquired in his concession and any diamonds produced would be sold through the central selling organisation. A number of potentially rich diamondiferous occurrences, it appeared, had unexpectedly been found. . . .

Other preserves of vital concern to South Africa are the shallows bordering the Atlantic coast of Cape Province and South-West Africa, for there is no reason to suppose that the supply of diamonds ends at the water's edge. Countless gem stones must lie scattered about the adjacent ocean floor, not all of them, or even the majority of them, necessarily brought there by the Orange River. Diamond pipes are just as likely to occur under water as on land, and the probability is that the mouths of many of them are located out to sea, as Merensky long ago conjectured in an attempt to account for the amazing richness of Africa's miles of diamond littered beaches. Strict governmental control is doubtless exercised seawards as far as the traditional 3-mile limit, but beyond this there would seem to be no legal bar to anyone engaging in dredging operations, assisted, if need be, by deep-sea diving apparatus and submarines.\*

\* The forthcoming construction of the world's first deep-diving submarine, able to operate at depths of up to 18,000 feet, was announced in Washington in 1959. It has been claimed that the vessel, which will possess a 6-inch-thick aluminium pressure hull, will make possible the gathering of undersea wealth on, and under, the ocean floor. Its designers envisage that the vessel could serve as a remote-control centre for unmanned dredges, employed to scoop minerals from the sea bottom.

Elsewhere on the African continent, meanwhile, another important diamond find was made in 1930 in Sierra Leone, a British Colony (coastal region) and Protectorate (hinterland) with a total area of some 28,000 square miles. Mineral rights had long been the prerogative of the Crown and, in 1933, the Sierra Leone Selection Trust acquired a monopoly in respect of diamond mining throughout the country for a period of 100 years. But Sierra Leone is a land of many rivers and numerous streams, and at one time or another precious stones have been washed to many parts of the territory, a fact of which the native inhabitants were not slow to take advantage. The activities of illicit diggers and divers reached such alarming proportions that they constituted a serious drain upon the economy, for the bootleg stones could not be sold through legal channels and much of the traffic went by way of the neighbouring State of Liberia, greatly to the benefit of the conniving officials thereof. Within two decades the drain reached an estimated £10,000,000 per annum, and the law-enforcement officers, faced with the hopeless task of patrolling vast areas of trackless jungle, found themselves powerless to put a stop to it.

Drastic action was at last forced upon the authorities in 1955, when the long-suffering Selection Trust was paid the sum of £1,570,000 to relinquish its monopoly rights and to accept a sweeping reduction in the extent of its lease. The ground thus made available was then offered, under licence, to members of the local populace and, at the same time, steps were taken to provide them with a recognised outlet for their stones at prevailing world prices. In effect, the problem was solved by the time-honoured expedient of legalising the illegality.

The Sierra Leone diamond deposits, in common with others which have been located in the Belgian Congo, French West Africa, Angola, the Gold Coast and elsewhere, are without exception alluvial, and the possibility of tracing some of the inland pipes which gave rise to them is an enticing prospect which has doubtless already claimed some attention. As for the pipes themselves, there is as yet no general agreement about the manner of the formation of the carbon crystals which they are often found to contain, and at least three theories have been advanced—that deep-seated rock in which the crystals had previously formed was dissolved and brought to the surface by volcanic material; that carbonaceous material was dissolved by volcanic rock and crystallised from it under high temperature and great pressure; or that diamond was an original constituent of the blue ground and remained unaffected by

changes wrought in this mineral by the action of steam. Thus there may yet be found a primary source of diamond, compared with which terrestrial surface deposits (of which some 55 tons have so far been gathered) will appear as but a grain of sand to a mountain.

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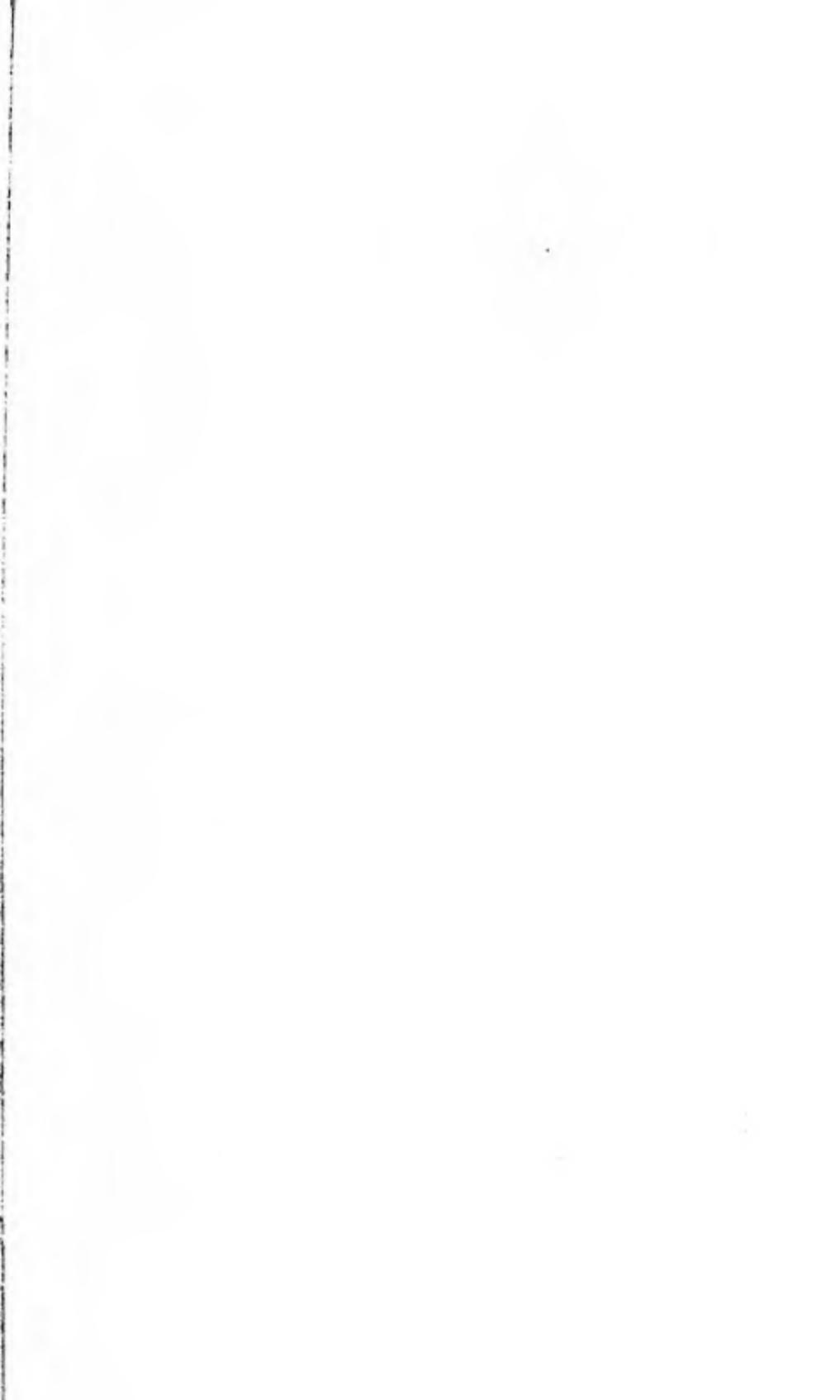
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